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Robert G. Norman.

I Trustworth.



*To Mr. Lawrence
2 Edin'g Park,
with Sir W. J. Hooker's respectful
regards.*

NOTES ON NORWAY;

OR

A BRIEF JOURNAL OF A TOUR

MADE TO THE

NORTHERN PARTS OF NORWAY,

IN THE SUMMER OF

MDCCCXXVI.

His Late

BY WILLIAM DAWSON HOOKER, M.D.,

PROFESSOR OF MATERIA MEDICA IN THE ANDERSONIAN UNIVERSITY.

"*Uterius nihil est nisi non habitabile frigus.*"

(UNPUBLISHED.)

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TO

THE VERY REVEREND DR. MACFARLAN,

Principal of the University of Glasgow,

&c. &c. &c.

To you, my dear Sir, have I ventured to dedicate the following pages, descriptive of a "summer vacation" spent in a voyage to the arctic shores of Norway, and of a few weeks' residence among their interesting inhabitants. This excursion was undertaken at a very early age, with the view of gratifying a thirst for travelling, and an ardent love (inherited though it be) of the works of nature, while yet a student in the College over which you have long presided with so much honour to yourself and usefulness to the Institution and to the country at large.

I have the honour to be,

My Dear Sir,

With the highest respect,

Your faithful and obedt. Servant,

W. D. HOOKER.

WOODSIDE CRESCENT, }
GLASGOW, Sep. 30, 1859. }

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TAB. II.—VIEW OF KAAFIORD.

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FIG. 3. Norwegian Oar.

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FIG. 1. Lure.

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FIG. 4. Laplander with his Skies or Snow-Skaites, and Guiding Pole.

JOURNAL OF A TOUR

TO THE

NORTHERN PARTS OF NORWAY.

AN opportunity having been afforded me of visiting this remote country, which few travellers have ever seen, and which I imagined would present both numerous and interesting subjects of Natural History, especially relative to my favourite study of Ornithology, I set out from Glasgow for London, on the 7th of June, 1836, expecting that the vessel in which I was to take my passage would sail very shortly. In this expectation I was disappointed: a considerable delay intervened; and while this was partly an advantage, as enabling me to see many objects in London connected with my projected excursion, and to converse with several individuals who could communicate valuable information on this point; still it proved, eventually, a serious disadvantage, as the sequel of my journal will show. My time in the metropolis was pleasantly spent,—thanks to the kindness of my friends, especially of Mr. Christy,* in whose house I was staying, and with whom the plan for visiting Norway had originated.

* The late William Christy, Esq., Jun., FL.S.—for it is with the deepest regret that my family has just received the news of the death of this excellent and amiable young man, which took place at his Father's residence in Clapham Road, Stockwell, Surrey. He was the friend and patron of Botany, and died in the prime of life, after a lingering illness, beloved of all who had the happiness of his acquaintance.

All my arrangements, purchases, &c., had been completed for some days, when we received notice to send our goods and chattels on board the *Harriet*, which was the vessel destined to convey us to Norway. She was a well-built schooner, of about 230 tons—a rapid sailer—and one whose *tout ensemble* every mariner would survey with feelings of delight.

On the 28th of June, our party, consisting of Mr. Christy, whose attention was chiefly directed to Botany, Mr. Walker, an Entomologist, and myself, sailed from the Thames. There were also three passengers for *Alten*, or *Kaafjord*, all gentlemen in connexion with the mines of the latter place; namely, Mr. Crowe, who is the manager of the mining establishment, and who holds likewise the office of English Consul, at *Hammerfest*,—the most northerly port and town in the world,—his son, Mr. John Crowe, who was going to settle in the same place, and Mr. Galt, a friend of these gentlemen.

After some days, we got out of the Nore, and passing Yarmouth Roads, lost sight of land. Time soon began to hang heavily on our hands, when we could discern nothing but sky and water to divert our attention; fishing, also, became poor sport, as we seldom caught any thing but a few *Grey Gurnards*; thus, rifle and pistol-shooting at empty claret bottles swung at the yard-arm, constituted our chief amusement. When the weather was warm and calm—which it often was—we plunged into the sea to refresh ourselves, but the increasing frigidity of the water soon chilled our inclination for bathing, which became impracticable from this cause, by the time we reached the latitude of the Shetland Islands, though the heat of the sun was quite scorching.

The farther north we proceeded, the longer grew the

day, and soon there was no night at all. When, for the first time, Sol showed himself above the horizon, at twelve o'clock at night, we all remained on deck to enjoy this—to us—novel spectacle; the orb seemed, when viewed through coloured glass, of an enormous size, and appeared as if flaming, while the temperature of the air fell about 30° below what it had been at six, P. M.* Another phenomenon presented itself shortly after, which was a *Parhelion* or double sun; we did not see the *entire* diameter of either orb, one of which was above, and the other below a strip or band of cloud; five-sixths of the lower sun were visible, and about three-fourths of the upper one, the unseen portions being concealed behind the cloud. It was a little before midnight that this appearance took place.

In these latitudes we frequently saw the *Lestris Richardsoni*, and *L. parasiticus*, chasing the other gulls, and causing them to disgorge their prey; sometimes, however, they took all this trouble in vain, the gull being either stubborn, or having nothing to disgorge. The rapidity with which these birds will turn in their flight, and catch any substance that the gulls let fall, is truly astonishing; it seemed quite immaterial how near the ejected matter might be to the surface of the water, or in how great a number of fragments it might be vomited, every particle was instantaneously seized and swallowed.

On entering the Arctic circle, we found that there was a fine to be paid, as is the case on crossing the equatorial Line. The penalty, on refusal, was tarring, shaving, and baptizing:

* Owing, as will be afterwards seen, to the loss of the earlier part of my journal, I am unable to state, from mere recollection, the *day* that we first saw this, or the lat. and long. we were in at the time.

this unpleasant ceremony we, however, contrived to escape ; the captain not being a very brilliant calculator of latitudes and longitudes, and the crew being thus ignorant of our position, till we had already entered the circle some hours, when, of course, we maintained that their claim was invalid, and not a little rejoiced were we at our good fortune, for the sailors do not begin by offering the choice of a fine or the ordeal, but administer, in the first place, an abundant drenching with the frigid waters of the Icy sea, calling out at the same time, “ how much to let you off ? ” and when the poor shivering wretch opens his mouth to make the bargain, in rushes a flood of salt water, by which he runs a good chance of being made very sick ; thus he has often both to suffer and to pay.

In ten days after leaving Yarmouth Roads, we came abreast of the Loffoden Isles, which exhibited most curious and extraordinary shapes ; some of them being sharp, rugged, and conical, while others had table-land summits, with glaciers of great extent, and immense patches of snow, extending very low down their sides, even within a few feet of high water mark, exposed to the full rays of the sun, and yet remaining unmelted all the year round, owing, chiefly, I suppose, to their great depth,—for most of them lay in gullies and hollows,—and partly to the intensity of the winter’s frost. Here we saw what is termed the *loom of the land* ; this is the *flat* appearance which distant land assumes, however rugged and broken its outline may really be. Again, some islands will look as if inverted, and extending along the surface of the water, with which they appear connected by a slender stalk, like some kind of mushroom. Sometimes, under this delusion,

two or three islands run into one another ; each one, however, retaining its own characteristic *stem*, as it were ; changing their forms into the most amusing and whimsical shapes imaginable every minute.

One night we were gratified by seeing a splendid luminous cloud, similar to a mass of iron heated to whiteness, or perhaps more aptly to be compared with the rays of the sun striking upon a mirror, but even more brilliant ; so dazzling, indeed, that I could hardly glance at it ; the same phenomenon, but considerably inferior in brilliancy and splendour, presented itself some weeks after, when we were at Alten.

Whales, I might almost say, *swarmed* around us, many of a very great size. On the 11th of July, two of these creatures, each ninety feet in length, came and played round the vessel within three yards of us, remaining a considerable while, diving and rising at intervals, and every time they appeared above the surface, ejecting water from their blow-holes, and then descending head foremost, flung their tails high in the air ; or remaining with their heads perpendicularly downwards, lashing the water into foam with their enormous tails, as if to show us the tremendous power and strength they are endowed with ; they seemed, indeed, full of frolic. These “monsters of the deep” do not blow, as is usually represented in pictures, where they are commonly portrayed as throwing up two splendid *jets d'eau* into the air, but they emit with great violence and with a sound like the letting off a very large rocket,—a sound that may be heard in calm weather, when the animal is at too great a distance to be seen,—a quantity of water, in the form of a very dense mist, which rises upward about fourteen or sixteen feet, escaping

much in the same manner as steam does from the safety-valve of a high-pressure engine. Mr. Crowe, who is well acquainted with the whale-fishery, says, that had our vessel been coppered, it is not improbable they would have rubbed themselves against her sides, or gazed to admire her brightness, for Leviathan, especially if the metal sheathing be new and brilliant, seems as much pleased with it as a child with a new penny. It must be recollected, that the whale I here speak of is not the *Greenland whale*, which seldom exceeds sixty-five feet in length, but the *Rorqual*, or *Finner whale*, as the fishers call it, *Rorqualus borealis*; its size is often much larger than those we saw*—their motions are very rapid—their blubber scanty—and the *baleen*, or whalebone, short—so that this whale is not worth the general attention of the fishers, nor indeed can it be caught by the usual means. Mr. Crowe told me that an expedition, in which he had some concern, was fitted out for the express purpose of killing these whales, and instead of harpooning them, they fired Congreve rockets into the animals; but the consequences were not calculated upon. They *killed* plenty by that plan, it is true, but failed in *catching* them, for the intestines, &c., being blown out by the bursting of the rocket, the fish invariably sank. A much fuller description than I can here give, will be found in the Naturalists' Library, a work edited by Sir William Jardine; the volume upon this subject every one interested in that department of the works of Nature should read, and

* It may be asked how we ascertained the length of the two whales here spoken of; the method was very simple,—they lay alongside of, and close to us; we, of course, knew the measurement of our vessel's length, and thus calculated to within a foot, the whale's dimensions; the value of such carcasses as those, would be about £50 each.

I need hardly assure him his time will be fully repaid by the amusement and instruction received. Grampuses, porpoises, and a species of shark were continually tumbling about, blowing and disporting themselves in the water.

(Since returning from Norway, I accidentally saw in Captain Basil Hall's *Fragments of Voyages and Travels*, the confirmation of a circumstance which I had previously forborne to speak of, fearing that from its extreme improbability, it would merely be set down as a young traveller's tale,—I allude to the fact of *whales leaping clean out of the water*. I myself saw one of these creatures, apparently in a sportive mood, spring upwards horizontally, to a height about twice its own breadth above the surface of the sea, three times consecutively. Mr. Christy and several other individuals were witnesses with myself to this freak of the unwieldy Leviathan. The day was warm and bright; several other whales were blowing and rolling about, raising themselves considerably out of the water, but no other played similar pranks, or cut such capers, all of which seemed executed for its own special amusement, and without any apparent cause. Had there been gulls soaring above, I might have supposed that the whale was tempted to spring at them, like a trout at a fly; nor could I descry any object from which the animal might desire to flee. On reading the above-mentioned work of Sir William Jardine's, I find that the Greenland whale sometimes performs this feat, but the cause is unknown.)

Acerbi mentions that sharks are seen at Altengaard, and though, by all the accounts of the people at Hammerfest and Alten, this author is not always to be trusted, and never so much as visited the North Cape, of which he gives such a par-

ticular description;* yet, in this instance, he speaks the truth; though, indeed, I never could learn that these creatures are in any way to be feared.

On the night of the 13th, the sun shining brightly all the time, we fell in with two Norske fishing boats, who tried to avoid us, supposing that we wanted them to pilot us through the Loffoden Isles—a service they are compelled by law to render, if required. We made up to one of these, and Mr. Crowe, who speaks Norske as well as English, conversed with the boatmen. They had a quantity of newly-caught fish, of which we selected the following for purchase:—a huge Hallibut, weighing about two cwt., and measuring five feet in length; a Cod, the largest I had ever seen; three great Torsk or Tusk; and four enormous Ling: for this supply we paid half a dollar, or two shillings sterling, and it proved much more than our whole ship's company could consume, even had they eaten nothing else, for several days. The fishermen were clamorous for a *dram*, as they termed it; at Mr. Crowe's suggestion this was given them in equal portions of whisky and water, at which they made wry faces, and wiped the water from their eyes, exclaiming that it was "*meiget stoerk*"—very strong, but they nevertheless pronounced it "*meiget gut*"—vastly good, and begged for more. These men were rather under the middle stature, with sharp features, high cheek-bones, and sallow complexions; their hair was long, ragged, and sandy; their beards of the same hue, and very

* It is supposed that he described *Hojoen*, instead of the North Cape, a small island near Hammerfest, of which I shall more particularly speak hereafter.

scanty; their eyes were light blue or grey, and the general expression of the countenance particularly good-humoured, and even waggish, especially when they looked up; their eyes, shaped like those of the Chinese, did give their faces such a droll cast. As to their dress, they wore tightly-buttoned jackets of light-coloured coarse cloth, wide trowsers, red caps, like night-caps, made of thick woollen material, mittens of a similar fabric, but white, tipped and cuffed with black; the latter were particularly beautiful, very fine, and of snowy whiteness; I wished much to purchase a pair, but the owners could not be induced to part with them; on their feet they wore the *Komager*. (To this kind of shoe, as well as to the peculiarity of their boats, I shall allude on a future occasion.)

The fishing-boat had not left us many minutes, when we found that a very large *Coalfish* (*Gadus carbonarius*) had become hooked to one of the lines that we always kept trailing astern. To an inexperienced eye this fish is in its shape and size strikingly similar to the salmon, only more elegant in general *contour*; the back is quite black, and the belly silvery. After it was hauled upon deck it threw up a great number of small fish, apparently the fry of its own species.

A few days after, while we lay becalmed for some hours, I took the opportunity of killing several Kittiewakes, which were hovering over some object in the water, as well as picking up any thing we flung over-board. They had been feeding upon the *Bergelt*, or Norway Haddock, of which I procured the remains. This beautiful red fish, *Roed fisk*, as the natives call it, (*Sebastis Norvegicus* of Yarrell) measures about a foot and a half in length, and exhibits all the hues of a gold-fish, while its general appearance so nearly resembles the Perch

that Linnæus called it *Perca marina*. The kittiewakes had mutilated the specimen considerably, but as the fish is by no means common I preserved the head. In Norway the Bergelt is considered a great delicacy, especially the flesh about the head; it is only caught in very deep water, with long deep-sea lines, and consequently does not very often appear at table.

On the 14th we met a vessel, and as soon as we discovered her to be British, we descended to the cabin, and opening our desks, wrote about our own well-being, and the marvels we had already seen and expected to see; which, being hurriedly done, we sent our despatches on board the John of Greenock, wishing her a good voyage. We then proceeded, and on the same day passed *Fugleoe*, which island I did my best to sketch; but the evaporation in these high latitudes is so great that the vision is very much impeded when directed to distant objects at sea; they have the appearance of being viewed through smoke on a frosty day. Upon the summit of this island the entire skeleton of a whale is said to exist; but this account seems somewhat marvellous, as, to judge from the eye, the peak of *Fugleoe* must be about four or five hundred feet above the level of the sea, and covered with snow; had our time allowed us we would have gone ashore to try and find these relics. The etymology of *Fugleoe* is *Bird* or *Fowl Island*; upon it, as well as upon the Loffodens, lay large patches of snow close to the water's edge, and unmelted even under the dissolving influence of the summer's heats.

On the 15th we passed the town, or rather the village of Asvig or Hasvig on the island of Soroe, whence a pilot came

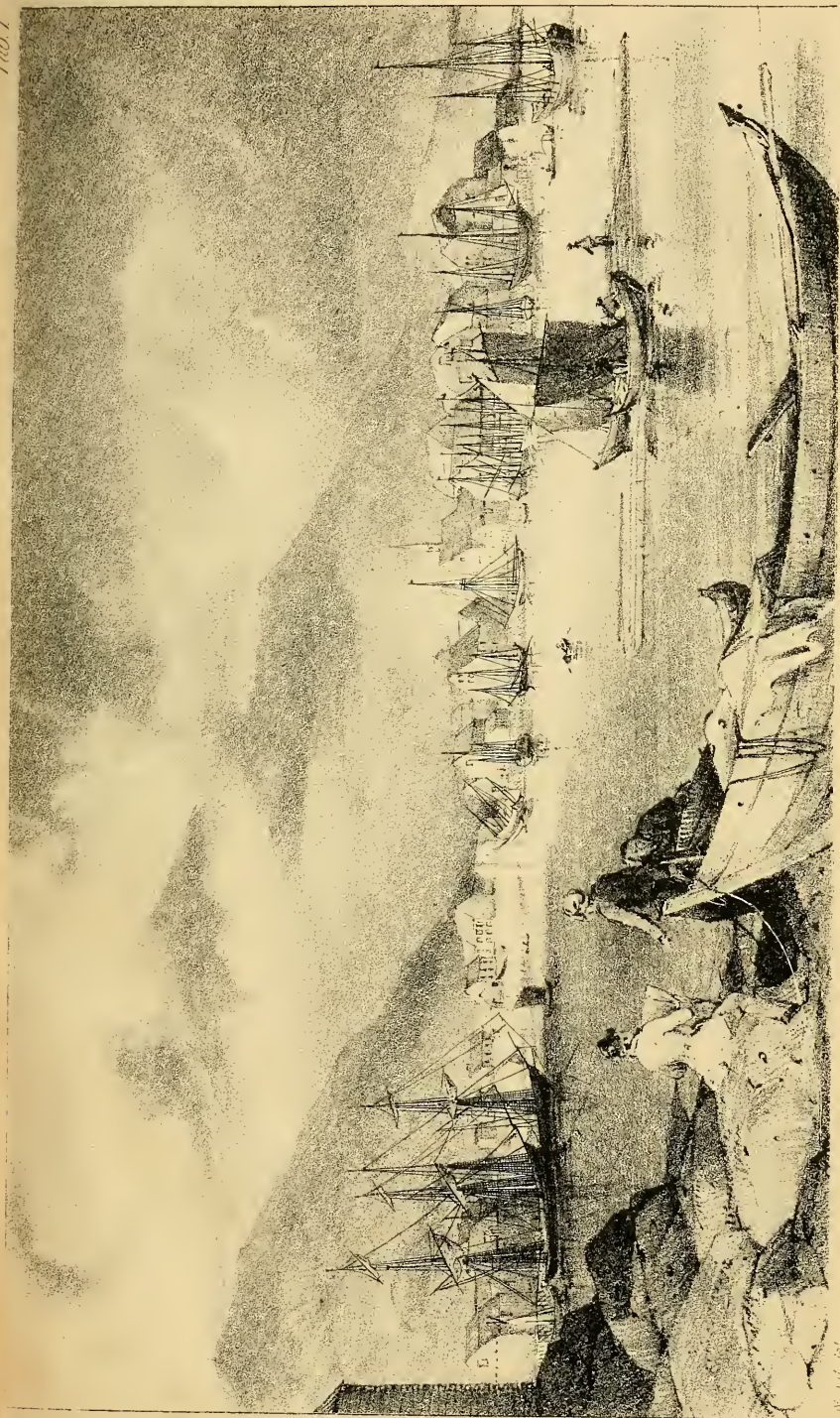
off to us; and though, with Mr. Crowe on board, we could have dispensed with his services, still the law does not permit any one to refuse them when offered. This man informed us that three French gentlemen were on their way from Asvig to Hammerfest, and thence to proceed to the North Cape for scientific purposes, or, as he termed it, "breaking stones and killing birds." This news was agreeable to us, as we hoped the travellers in question would prove desirable companions.

After passing Asvig a little way, we landed upon Soroe, Mr. Christy provided with his vascula, Mr. Walker with his insect-nets, and I with my gun.

Much pleased I was, and I may add, somewhat surprised, with this my first ramble on Norwegian ground; for though I was prepared for the absence of trees, of which there were none save stunted *Birches*, I did not expect to see such luxuriant vegetation of other kinds: the herbage through which I, as it were, waded, grew as high as my hips. I was first struck with the little *Cornus Suecica* flowering everywhere in the greatest profusion, and also recognised several genera, such as *Geranium*, *Viola*, *Pinguicula*, *Bartsia*, *Pedicularis* and *Allium*; the *Rubus Chamæmorus* flowered in every direction, but I could find none of its refreshing ripe fruit. In the ornithological department I noticed *Eider-Ducks*, *Oyster-catchers*, *Terns*, *Gulls*, *Sandpipers*, two small species of *Hawk* and a *Fishing Eagle*, with plenty of *Ravens*; but all these birds seemed as wary as in England, if not more so, for I could not get within gunshot of any except the gulls and oyster-catchers. The snow lay within ten feet of high water mark, and that we might have it to say that we had

played with snowballs on the dog-days, we presently laid aside all scientific pursuits, and began scratching up the snow to pelt each other, like so many children let loose from school on a winter's day in England. Here we lost a beautiful blood-hound, belonging to Mr. Walker, which would not return to the boat, but setting off for the hills, was soon beyond all pursuit, so that we were reluctantly obliged to leave him behind, where, we doubted not, he would commit no small destruction amongst the herds of tame Rein-deer. During my unsuccessful search after the dog I fell into one of the numerous holes in the rocks, concealed from view by the snow and the *Dwarf Birch* (*Betula nana*) growing over it, and hurt my leg severely, besides receiving such a blow on the chest as caused me, on my return to the *Harriet*, to throw up a large quantity of blood, and left me very weak as well as lame.

On the 16th of July we reached Hammerfest, and anchored off *Fugleness*, the property of Mr. Crowe, and where his storehouses are situated. We waited till the *Tolder*—collector of taxes or toll, with several other gentlemen, came on board, dressed, of course, in the English fashion, each carrying a long pipe, with a capacious bowl, in his mouth. We went ashore and called upon Mr. Ackerman, one of the principal merchants at Hammerfest, after which I hobbled off to visit the French gentlemen, who had arrived before us, and had taken possession of the Inn. We found them at home, and spoke of accompanying them to the North Cape—a proposal which they appeared to receive with the same readiness with which we made it. One of these Naturalists showed us his sketches, which were beautiful and



W. J. d. del.

HANMERFEST,
the most northern town in Europe. N. Lat $70^{\circ} 39'$

Il. H. J. d. sculp.

highly finished; another is an ornithologist, and he prepares his specimens with all that taste and neatness of hand for which the French are justly noted; while the third devotes his attention to geology and mineralogy. We parted, highly pleased with the prospect of having such companions in our intended expedition to the North Cape.

The houses of Hammerfest are all built of wood, most of the timber coming from Alten, as there are no trees whatever to be found in Qualøen (or Whale Island,) on which the town is situated. The foundations of the superior buildings are of rough stones, generally plastered over; the walls about six or eight inches thick, formed of the *squared log*, not of planking, between each log is inserted a layer of *Sphagnum* or bog-moss, which effectually excludes the cold; very few nails are used, wooden pins being generally substituted. The roof is covered with birch bark, with shingles or turf laid above; the birch bark is very durable, and quite impervious to moisture, besides having a pleasant smell. I only observed one house that was tiled. Glass windows are in every dwelling; but the glass, that comes from Russia, is of a very inferior quality. Along the shores of Hammerfest bay, as far as the town extends, stretches a wooden quay, on which the storehouses are erected, while upon its waters float many vessels belonging to different nations; the clumsy lodgies of the Russians—the classical Norwegian yawls, the objects of such terror to our British ancestors, and of which, I may add, pretty correct representations are still to be seen rudely carved upon the tombstones of Iona—French and German brigs—while, superior in grace and elegance to all, lay the *Harriet*, with her tapering masts and slender spars, calmly

reposing upon the still bosom of the Arctic sea. When I considered that I was in the northernmost port and town in the world, I was surprised to find so many vessels. Higher up the bay are situated three or four houses for extracting oil from the livers of fish, which is sold to the Russian and other vessels: this article, together with dried fish, forms the chief, indeed, I may say, the only export trade of Hammerfest; in return for which the people receive meal, flour, and other necessities of life. These oil-houses are by far too close to the town, for they emit a dreadful stench of burnt oil, which is much at variance with the exquisitely neat and cleanly appearance of the town itself; indeed, the *exterior* of these buildings is neat and clean enough, but the effluvium that proceeds from them is so revolting that I never could summon resolution enough to enter and see the process by which the oil is extracted, but as I hurried past and glanced in, I saw immense reeking vats full of oil, and the workmen moving about as unconcernedly as if they were distilling rose-water, instead of burning cods' livers. In the town is a church, and at a little distance a grave-yard; the former a primitive looking object and very old, as its exterior testifies, built of planks, and painted rusty black. The graves are tastefully kept, surrounded by wooden rails, neatly carved with the knife, and painted black and white, while the mounds are strewn with flowers of heather, &c., tied up in little bunches. After my stroll, which lasted till ten o'clock, I was glad to hobble home to Mr. Ackerman's, and seat myself at his supper-table.

The interior of the Hammerfest houses agrees with their outside in neatness and cleanliness; the uncarpeted floors of the rooms are strewn with juniper tops, and the walls covered

with painted canvass. In a recess of the German stove stands a box of goodly dimensions, replenished with tobacco, while the pipes hang upon the wall, every gentleman carrying his own pipe with him wherever he goes, and before sitting down, helping himself out of the tobacco box, as it would be considered derogatory to the hospitality of the host if he took his own tobacco pouch. Then, lighting his pipe, he begins to chat. De Capell Brooke, whose *Travels in Norway* are well known, complains bitterly of the Norwegian habit of spitting on the floor, but in justice to the Hammerfestian gentry, I must declare, that expectoration, even while smoking, is not common, and upon such occasions I always observed that boxes were used for the purpose, filled with juniper tops. Most assuredly, I never saw a lady guilty of any thing of the kind, and am therefore bound to suppose that they have profited by De Capell Brooke's animadversions. Indeed, now that I am upon this subject, I may say that I was much struck with the scrupulous attention that is paid to cleanliness by the natives of this country, in all respects very far exceeding that of most nations, and which might be copied, in many points, at home, to great advantage. When strangers visit a country, they should rather endeavour to conform to the habits, manners, and customs of the people, than launch out into invectives against them. As to smoking, the practice is so universal that none but a foreigner is ever annoyed by it, and I verily believe that a merchant of Hammerfest would sooner give up any comfort than his pipe.

At Mr. Ackerman's dwelling, we sat down to a large and excellently prepared supper-table, the lady of the house taking care of her guests, and supplying all their wants with

that quickness and alacrity which nothing but true hospitality could prompt. Among other good things, were dried reindeer meet, which was excellent; ptarmigan, killed last Christmas, and preserved by the frost; and, to conclude the repast, a kind of sour cream, called *Filbunke*; it was thick, glutinous, and eaten with sugar, very palatable, and I doubt not very wholesome also, at least it agreed perfectly well both with my taste and my stomach.

Sunday, 17th.—To-day we all went to church, but the service being conducted in Norse, I could not, of course, understand very much of it. The form of religion is Lutheran, but I was surprised to observe upon the altar a carving of the Crucifixion, and a Madonna, &c., with two huge gilded wax tapers; the pulpit is made of curiously carved fir, of rough but masterly workmanship.

Glancing round at the congregation, I was much struck with the similarity which it bore to country assemblages of the same kind in Scotland. The countenances of the Norwegian people, their dress, with their devout and orderly deportment, reminded me very strongly of a Scottish country kirk.

Our French friends came and dined on board with us to-day, and, since the Sabbath here, as in most continental nations, ends at six P. M., we took our guns and ascended the Tyvefield, or Thief Mountain. (I never could learn how or why it obtained this approbrious appellation, which probably had its origin from the same root as *Tyburn*.) This hill rises to an elevation of 1366 feet above the level of the sea, behind the town of Hammerfest, and from its summit the North Cape is visible. I found much fewer plants than on

Sorøe, and of insects still fewer. I once caught what Mr. Walker thought to be *Hipparchia blandina*, but the specimen was considerably injured. One species of insect is unfortunately very common, and this is the *Mosquito*, the same genus as our gnat, *Culex pipiens*, but climate somehow alters his nature here, and with his long trunk he proved a sad annoyance, for more than once my eyes were fairly closed up with the punctures of this troublesome little creature. Behind one or two of the houses, I saw an attempt at a garden ; a bit of ground, about the size of an ordinary sitting-room, where a few *Radishes*, *Turneps*, *Lettuces*, and *Parsley plants*, struggled to elevate their starveling heads into the ungenial atmosphere. About a dozen stalks of immature *Rye* were also growing, and when I inquired what could be the use of such a small quantity of corn, I was informed that it would never ripen, but was only raised as a curiosity.

Tuesday, 19th.—Yesterday and to-day the wind was extremely high, and bitterly cold, coming from the north, and this, I was given to understand, was the prevailing weather at Qualøen during the summer season. However, I took my gun, and accompanied by one of our French friends, managed to climb up some of the most elevated points in the neighbourhood, where I was much struck with the evidence that presented itself of pretty large trees having formerly existed upon Qualøen, where nothing now but a few stunted Birches can be seen. Dead stumps of considerable size of this kind of timber, still stand erect, some of them with branches bearing twigs even as small as my little finger, with the bark sufficiently recent to tell that the decayed trunks it encompasses belong to the genus *Betula* or Birch, thus indicating

a comparatively recent date of destruction. Upon being kicked, these semblances of life crumbled into dust. The air of Qualøen possesses a peculiarly drying and anti-putrescent quality, so that I doubt not but these trees, or rather these remains of trees, may have existed in this state for perhaps centuries, as it is not in the memory of man that living trees of such magnitude grew on the island; but tradition says that Qualøen was formerly covered with fir timber of great size. This sight gave rise to a train of speculations in my mind, none of them capable of very satisfactory solution. There cannot be any analogy between this phenomenon and the remains of forests, as found in peat-bogs in Scotland, because the latter is occasioned by moisture, and the former is observable where there is no moisture to effect any such change. The Hammerfestians say it is owing to the increased length and severity of their winters; but, again, the question arises, to what are these alterations of the climate owing? This island bears, as I thought, strong marks of volcanic formation; here and there I observed those small, dark, and deep mountain-lakes, such as are called in Scotland *Tarns*, which look as if they had been craters, but are now filled with intensely cold water, while scattered round their edges, lie stones, apparently of volcanic origin. Whilst scrambling hither and thither, we came unexpectedly upon a herd of Rein-deer, who immediately upon seeing us, scampered off in beautiful style, tossing back their antlered heads, and bounding along as lightly as if they disdained to touch the earth. At a pretty late hour of the night we began our descent, having killed some golden plovers, and a species of snipe; the air on the hills was desperately cold, and I was

glad that Monsieur had more forethought than I possessed, for he took a rather capacious *M'Intosh bag*, replenished with capital Cognac, to which we made frequent applications during the day's ramble.

Thursday, 21st.—After rising early, and taking some sketches of the neighbourhood of Hammerfest, I determined upon an excursion to Hojœn, or the *Greater Hielm*, a rocky island, about five or six English miles from Qualœn, in order to shoot such sea-fowl as I might find there. The day was fine, and I proceeded in the *Harriet's* jolly-boat, accompanied by two sailors. After wandering about a good while, and finding birds rather scarce, we ensconced ourselves in a sheltered nook, to eat our rye-bread, and drink brackish water, until the wind should either so change or subside as to allow of our return. Midnight arrived, and yet the Norske fishing boats were employed as busily at their vocations, if not more so, than by day. Finding stillness was by no means conducive to our comfort in so cold a situation, we went birds'-nesting among the stupendous cliffs, and captured several young herring-gulls, two of which we brought alive to Swansea. I obtained too a considerable quantity of the *Angelica*, the stems of which are eagerly gathered and eaten by the Norwegians and Laplanders. I also procured plenty of *Lithospermum maritimum*, in flower. It was six o'clock in the morning before the wind permitted us to leave the Hielm.

Friday, 22nd.—On my arrival at the *Harriet* this morning, I found that several things had been arranged during my absence. First, that the expedition to the North Cape, on which I had set my heart, should be abandoned, the weather being now very unsuitable and threatening to continue so,

thus rendering the passage in an open boat both uncomfortable and perilous ; besides, it was likely to be protracted so long, that the captain expressed his fears, lest, on our return to Alten, we might find the *Harriet* already gone. As I had no option but to return to England by this vessel, I dared not run such a risk. Thus, we most reluctantly allowed our French friends to depart for the North Cape without us, and this, they, being masters of their own time, did the very next morning at an early hour. Secondly, I found that the giving an entertainment to the Hammerfestians, an affair that had been only spoken of as a joke, was now fully determined upon, the decisive step of inviting several individuals having been already taken.

After breakfast, we went on shore to inspect our *ball-room*, the late abode of our French friends. The apartment was large and neat, while its elastic flooring made it a capital room for the purpose. We therefore engaged the Hammerfest Assembly Rooms, and Madame Bang, the landlady, a most notable woman, promised to have every thing prepared in a style superior to all that Hammerfest had ever witnessed. I left my companions to make the needful arrangements, and went with my portfolio up the bay, as far as the mouth of a small stream, where I sat and sketched the town, with the opposite peninsula of Fugleness ; but hardly had I half finished my drawing, which I was anxious to make as accurate as possible, when the rains descended, and the winds blew, and drove me from my seat.

While I had been sketching, I noticed several filthy, half-clad Russian sailors, cutting birch twigs, and then saw them strip themselves quite naked before a dirty looking hut, from

the crevices in the roof of which, for there were no windows, steam and smoke were continually issuing. As often as one of these unfledged animals entered, there poured forth, from the open door, such volumes of steam and vapour, as greatly excited my curiosity to know what might be going on within. I also saw several women walking in and out, apparently to cool themselves, and drinking large quantities of the coldest water, while in a state of the most profuse perspiration. So, conjecturing that this must be one of the *vapour-baths*, of which I had often read, I went up, and, opening the door to press in, was driven back by the sudden inhaling of hot steam; but again I plucked up courage, and holding my breath, I thrust in my head, and dimly descried, upon a kind of a shelf or loft, raised several feet from the floor, a number of disgustingly dirty, long-bearded Russians, either flogging themselves, or being flogged by women, with the birch twigs which they had been cutting. Others were washing their bodies in tubs of water; but my vision was so much impeded by steam, that I could see nothing farther, but withdrew, coughing violently, and my eyes streaming with water. I then went back to the *Harriet* to dress for the ball, and was told that every respectable person in Hammerfest had been asked, and that not an individual had refused the invitation; so that we might expect a full room. The hour fixed for meeting was half-past six: we, of course, as the *Giest-givers*, had to be there first, and were shown into an apartment below the saloon, where various eatables were set out. The gentlemen, shortly after, dropped into this room, where we waited to receive them, while the ladies were served with coffee, &c., up stairs. It was curious to notice the affection of the former for

smoking; each brought his own pipe, which he only laid down when in the saloon, and ever and anon retired for a short time to enjoy an invigorating whiff. This puts me in mind of a complaint of Dr. Clarke, who says, that a clean pipe is never offered to a stranger; and he animadverts, in pretty severe terms, upon the filthiness of the opposite custom. Now it must be remembered that a clay pipe is an unknown article here, and that the practice of carrying one's own pipe is so universal, that no one is ever seen without it. As far as I have observed, however, cigars are offered to those strangers who do not possess a pipe. For my own part, I adopted the custom there, and wherever I went, my pipe and tobacco-pouch always accompanied me; the former was seldom out of my mouth, and the latter dangled at my button-hole. Each of our visitors sat down and ate a hearty meal, and as soon as he had finished, rose up to make way for others, while we were assiduously engaged in helping them to corn-brandy, cognac, rum, or wine, drinking and touching our glasses with them. The former liquor is, to me at least, as well as to most English tastes, very unpalatable; fiery and strong, though destitute of flavour: to remedy which defect, it is common to add, artificially, the aroma of distilled Caraway-seeds. I brought some corn-brandy of both kinds home with me, the very best I could procure, but all my friends have agreed with me in condemning it. Whether flavoured or plain, it turned milky white upon the addition of a few drops of warm water, indicating the presence of some volatile oil, which can even be detected by the eye, floating upon the top. Though some of the gentlemen went into the ball-room before us, still no dancing was attempted till the *Giest-givers* should come.

On entering the saloon, we found the ladies ranged upon seats against the wall ;—I may correctly say *ranged*, for the matrons all sat together, then the unmarried damsels, then the younger girls, and lastly, those females whose rank did not amount to aristocracy. One corner of the room was filled by a raised platform, and surrounded by a railing, which served as an orchestra for the performers on the violin, who, as in other countries, were busily engaged prior to our entrance, in scraping, tuning, and rosining their cremonas ; but as soon as the Giest-givers were seen, we were honoured with a burst of music, quite a flourish of catgut, and presently the whole company were figuring away in a contre-danse. It must, however, be remarked, that some degree of etiquette is necessary in the opening of the ball. The Giest-giver on whom this duty devolves, is guilty of an alarming breach of decorum, if he does not select first the lady of the highest quality in the room. Thus, a lady entitled to the rank of *Frau*, or the wife of some official person, takes the precedence of all the rest, and all the *Fraus* must be handed out, before a *Madame* is asked to dance. To these punctilios, under the instructions of Mr. J. Crowe, we paid attention. Waltzes succeeded the first contre-danse, and here the ladies showed great grace and agility. I was somewhat surprised when after the first dance, glasses of punch, spiced wine and beer, were handed round, to which we were expected to help our partners, and pledge them. Of course, the ladies took only wine and beer, while the gentlemen usually drank punch, which is certainly extremely good, the Hammerfest people being famed for its composition ; the spiced wine was also very nice, and, I dare say, an excellent stomachic : but of the beer, I must aver

that it was disagreeable beyond all description, at least to an English taste. Upon a small table were placed liqueurs, sweet-meats, dried fruits, &c. During the intervals of dancing, the gentlemen kept walking in and out from the saloon, to the smoking, eating, and card-rooms, where they whiffed their pipes, drank punch, sang, ate sweet-meats, chatted and played at Boston or Whist for very low stakes.

Two Quadrilles were attempted, chiefly in compliment to the Giest-givers, whose performance was by no means such as to raise their character as dancers in the eyes of the Hammerfestian Waltzers. One or two Norske dances followed, through which we contrived to stumble, after many good-natured hints from our partners, and many stupid blunders of our own. At midnight, supper was brought in;—this consisted of Bear and Rein-deer ham, Sandwiches, with raw smoked Salmon, and the usual accompaniments of punch, liqueurs, wine, &c. Dancing, and especially waltzing, was again resumed with such vigour, that I soon hardly knew whether it was upon my head or heels that I stood, or rather staggered. At five o'clock coffee was introduced: at about six, the ladies began to withdraw, and in half an hour more the final separation took place; the fun was thus kept up for a whole dozen of hours. No one seemed in the slightest degree tired, except ourselves, and, indeed, one of the Giest-givers was so fatigued, that he had to retire and take a nap upon a hard wooden bench. On departing each individual shook hands with us, and thanked us for the pleasure we had conferred.

Saturday, 23rd.—This morning, having risen somewhat late, it must be owned, I proceeded to my yesterday's locality

to finish the view of Hammerfest, (*see Plate 1.*) after which I strolled a little way up the stream, at the mouth of which I had been sitting, and reached a small lake of bitterly cold water, so cold, that when, being thirsty, I stooped to drink, all my teeth ached with the icy feeling it communicated to them. On the banks I observed a Lapp tent, formed of skins, twisted round a frame-work of poles. No person was within nor did it contain any furniture, except two or three birch-wood bowls, some skins, &c. The fire-place was simply a raised hearth, formed of one or two large flat stones, in the middle of the tent, above which was an opening, serving for a chimney.

I had been much amused with a most original-looking engraving of the town of Hammerfest, which was suspended in the house of more than one merchant, where the accurate artist had represented *a gig* driving round the bay at full speed, in a place where it was quite difficult enough for a pedestrian to scramble along without breaking his legs! Moreover, I never saw a road, much less a wheeled vehicle of any description, in all Qualøen, and only two horses, and these were kept to be *eaten*.

While walking in the town with Mr. Walker to-day I was much perplexed: for on passing a store-house out rushed the merchant's son, all covered with flour, who followed us, bawling out, "tak, tak, mony tak." My companion and I looked round, and deeming there must be some mistake, continued our way at a brisk pace. Our friend still pursued, and I, hearing the call renewed, turned about, thinking that something might have dropped from my portfolio, and it was not till, thanks to these delays, the individual had come up to us,

that we recognised, in his *floury* habiliments, one of our guests of the preceding evening, who was anxious to return us his thanks for the entertainment we had given him. We were, in a similar way, pounced upon by several others, who not having had, the previous night, what they considered a sufficient opportunity of expressing their acknowledgements, now came forward to discharge that debt. The rest of this day was occupied in taking leave of our Hammerfest acquaintances, and in hunting through the stores to make some little purchases. Among other things I bought a Reindeer-skin *Paesk*, which I was told would prove very useful; it is made of the skin of the Reindeer fawn, or *Reincalf* as it is called, very soft and warm; its shape I cannot more aptly compare than to a sack with a hole in its bottom, and having sleeves sewed on. The threads used for attaching the skins together are composed of the tendons of that useful animal; this substance being almost always used by the Laplanders for sewing leather, fur, &c., but not for cloth, if they can get any thing else: it is very strong and will cut the fingers before it breaks. De Capell Brooke states that the hair falls off the skin of the Reindeer, after being wetted with salt water, unless immediately rubbed with snow; but the one which I now purchased had been for some days under water, in a vessel which sank at sea, and is yet as good as new; while another which I possess has been repeatedly drenched with salt-water, and though I never even took the pains to wash it afterwards, there does not appear to be a hair lost in consequence.

We now started for Kaafiord, (pronounced Kofiord,) in the *Harriet*, Mr. Aasberg accompanying us as a passenger.

I certainly felt some regret at leaving Hammerfest, where

so much kindness and attention had been shewn us, and where we had met with such a flattering reception. Its inhabitants possess all the courtesy and polish of the French, without the fulsome complimentary style so general with that nation; and I do aver that the ease and grace of a Hammerfestian bow, are worthy of imitation by the most refined dandy in Bond Street. I never experienced the inconvenience said to be so prevalently inflicted upon strangers throughout the Northern nations—and of which my father had full experience in Iceland—that of being pressed to eat more than one would wish; this is still too much the case in more southern parts, but here no one takes any more than his appetite inclines him, and all rise from the table at the same time, and going up to the lady of the house say, shaking hands with her, “*mony tak for mad,*” or “*many thanks for the meal;*” to which she replies “*welbekemmen,*” “*you are welcome.*”

As we passed out of the harbour we gave the good town of Hammerfest a parting salute, the grandest we could muster, being the discharge of eleven fowling-pieces, rifles, &c., to which a beautiful echo responded from the hills.

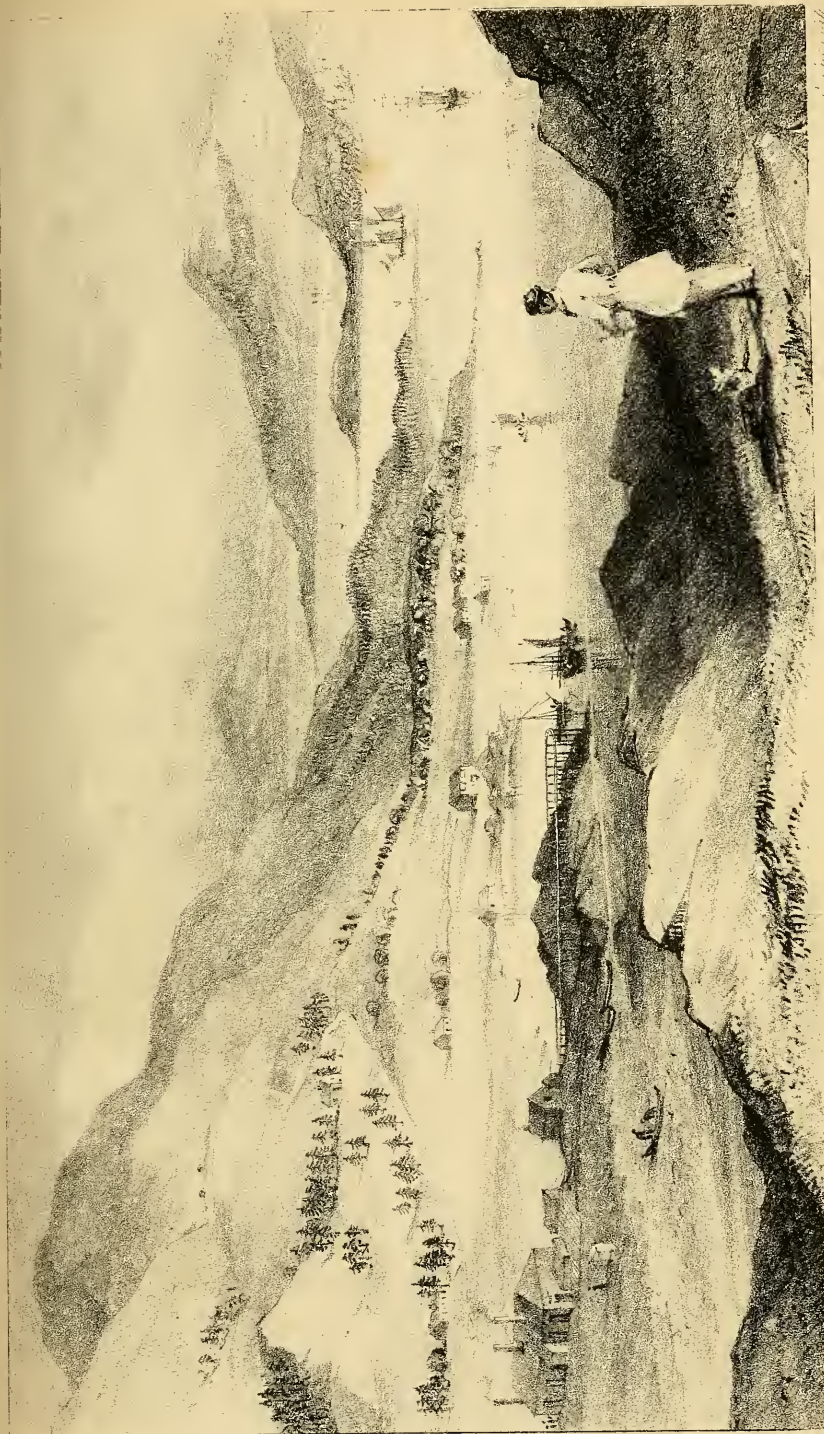
On our passage to Kaafiord, the extreme scarcity of water-fowl surprised me. Upon the open sea there had been a much greater number, but here no birds could I see at all except a flock of Gulls and Terns, chasing the fry of the Coalfish. As we drew near the mainland the scenery became very fine. Rocks dipping boldly and abruptly into the placid bosom of the deep, clothed to their summits with the sombre foliage of the Scottish Fir, beyond which were seen the glittering Glaciers, finely contrasted with the dark, yet bright blue sky, and the gloomy forests; added to all this,

the declining sun cast his rays on the dazzling surface of the icy masses, rendering them almost too brilliant for the eye to bear.

Sunday, 24th.—This morning, on rising, we found that owing to the wind being very light hardly any progress had been made, and the same weather continued all day. However about seven or eight o'clock, P. M., we passed the copper mines of Kaafjord, which, with their accompaniments of smelting-house, stamping-machine, &c. &c., were all pointed out to us by Mr. Crowe. The English residents soon after boarded us, and welcomed us heartily to Kaafjord, while, with the greatest kindness, Mr. Crowe insisted upon our making his house our head-quarters and home, in every respect, during our stay.

The rich views which here greeted us, differed strikingly from the barren scenes which we had left behind us at Qualløen. On that side of the Fiord which is opposite the mines extends a long range of bare, rugged, and precipitous rocks, while above the works the hills are finely wooded with Birch and Fir. Looking towards the head of the Fiord, deep sloping vallies, and blue distant mountains capped with snow, formed an exquisite and pleasing variety, while, through the dark colouring of the foliage, a waterfall was glittering; close to the shore, at the mouth of a stream, stood a row of miners' houses, their forms strongly reflected on the calm unruffled surface of the water; while the foreground was filled by numerous long canoe-like boats, with white sails. The whole formed a splendid subject for the artist.

The *Harriet* moored at the store-wharf, whence we proceeding to Consul Crowe's house, where we found several



VIEW OF KAAFIORD

Norske ladies, and the Bergmaster of Alten, who was on an official visit to the mines. After sitting down to a plentiful supper, we retired to our comfortable clean beds, very different from our cramped berths on board the *Harriet*.

Monday, 25th.—After breakfast, we went, accompanied by Mr. Galt, who is an excellent Norwegian scholar, and who kindly undertook to be our cicerone and interpreter, to visit the copper-mines, which are situated about half-way up a hill facing the fiord. I had expected to find them similar to quarries, as is the case in the great Fahlun copper-mines; instead of which, they are *levels*, driven horizontally into the face of the hill, some of them extending a considerable distance underground, branching off in various directions, and in some instances communicating with each other. The workmen are chiefly *Quāns*, with a few Norwegians. These two races of people are so perfectly distinct, as not to be easily confounded with one another. The former are a dull heavy-looking tribe, broad-shouldered, their faces flat and square, with high cheek-bones and sallow complexions; they came originally from the Gulf of Tornea, but have, for a considerable time, been settled in Finmark, for agricultural and other purposes: they are industrious, tolerably steady, and generally make good workmen. The Norwegians, on the other hand, who are the original denizens and proprietors of the soil, are tall, well-built, compactly formed and sinewy, with fair complexions, longish faces and sharp features: they are more talented than the *Quāns*, and look down upon their more mercenary neighbours as interlopers and intruders on their territories. What the *Quāns*, however, want in intellect, they make up by superior industry, steadiness, and per-

severance; for the Norwegian peasant, more especially the miner, is sadly addicted to drunkenness, making it almost a point to get intoxicated every Saturday, which here, as unfortunately in England, is the pay-day.

Women also work in the mines, not in the actual detaching and blasting of the ore; but chiefly in breaking it into smaller fragments, and picking it, or in clearing the mines, &c. Those whom I saw thus employed, were, with but few exceptions, very ugly and dirty beings, perched upon heaps of copper-ore at the mouths of the mines, busily employed breaking the larger lumps, rejecting the poorer pieces, and casting together those which were to go to the crushing-mill. The ore thus sorted, is then placed in carriages and pushed along railways till it reaches one of the *Shoots*: these are large wooden tubes, some of them forty or fifty feet long, while others measure as much as two hundred feet: down these it is shot out of these carriages, till it reaches the *Floors*, where it undergoes another picking and sorting, and is thence conveyed to the *Crushing-Mill*, which grinds it into fragments, varying in size from that of a split pea to a horse-bean, and in this state, after *puddling* or washing, it is considered fit for exportation. The process of smelting is, however, in course of being tried at Kaafjord, and there are hopes that it will eventually succeed.

The mountain in which the copper-mines are situated, is chiefly composed of Greenstone Rock, mixed with some quartz and calcareous limestone, especially where the veins of copper run. An immense quantity of copper is dispersed in the state of pyrites, and almost free from iron. New lodes of this are continually found, and were this metal but

concentrated into a few spots, the property would be quite invaluable. The poorest ores yield about ten per cent. of copper, and the highest average seventeen, though I saw some large masses, as big as a man's body, of pure pyrites, containing fifty per cent. of copper. This ore is very generally disseminated in great abundance, not occurring in scattered portions, which would subject the miner to some risk as to his profit, and uncertainty in his operations, but in rich bunches. The facilities for working the mines are considerable, plenty of wood and water being close at hand. Nor is there occasion to use steam in any operation, manual labour being cheap, and the workmen tractable, steady, and industrious. To crown all these advantages, vessels lie, I may almost say, alongside the mines' mouths: for the intervening distance being a few yards only, the ore is trundled into the ship upon inclined planks. At Swansea, and other places, this metal meets with a ready sale, at a very fair remunerating price. An idea of this may be formed by those who know something of the business, when I mention that in the year (I think) 1833, 700 tons of copper ore were raised and sold, and the profit on them amounted to very nearly £2000. Now, in consequence of more speedy and economical plans having been adopted for obtaining the ore, the profits, as well as the quantities sold, are much greater.

At the Ripas mountains, we understand the Mining Company have still richer mines, which we hope shortly to visit.

In the Alten copper a portion of silver is found, but a curious discrepancy exists with regard to the experimental results made by Captain Thomas, the scientific chemist of the Company at Kaaford, and by chemists in England. The

former is unable to detect above a third of the quantity asserted to have been found by the latter, though they made use of the selfsame specimens, and Captain T. tested them by the most delicate and oft-repeated experiments. The admixture of quartz and calcareous spar in the copper proves a great advantage, for as these substances are the very fluxes used for smelting the metal, it saves the trouble and additional expense of adding them for this purpose, when the ore is in the furnace.

The first object that attracted my attention when passing through patches of wood in our way to the mines, was the beautiful *Linnæa borealis*, growing in the greatest profusion, and perfuming the air all around with its delicately scented blossoms; it was not, however, till we had advanced some way, that we comprehended whence the rich odour that pervaded the vallies proceeded.

As soon as we saw this far-famed plant, we plucked large handfulls of it, sticking the flowers in the bands of our hats and button-holes, in emulation of its first discoverer, the immortal Linnæus. Mr. Walker busied himself with his insect-nets, while we all the while kept humanely wishing, with regard to the Mosquitoes, as Caligula did in reference to the Roman people, "that they had but one neck," and that Mr. Walker would sever that one! I noticed several crows making a most dismal croaking over the whitened bones of a Norske dog, of whose skull I took possession, but no other birds could be seen, except abundance of mischievous magpies. These birds exist here in great numbers, and the people regard them with a sort of superstitious reverence, which, as in Scotland, prevents their being destroyed, so that

they are particularly pert and familiar. I have counted upon one small birch tree, close to my bed-room window in Consul Crowe's house, no fewer than nineteen magpies, whose incessant chattering woke me in the morning. They seemed to be holding some high meeting of senate, where there was no Speaker to call to order, or rather, in which they were all speakers and no hearers.

Tuesday, 26th.—Mr. Crowe having settled his home affairs, set off with the Bergmaster to visit the interior of the mines, and see the progress that had been made during his absence ; and I feeling glad to avail myself of such an opportunity of inspecting them, put on my dirtiest habiliments, and, hammer in hand, accompanied these gentlemen along the same route that I had gone the day before. I ought to have mentioned that the mines are situated about a mile and a half distant from Mr. Crowe's house, and that a water-course is conducted from a stream near his dwelling, which extends for a length of almost two miles, to the crushing-mill. Wherever the ground sinks, this water-course is raised upon props, and where the ground rises, a channel is cut to receive it. The day before we arrived at Kaafiord, one or two of these props gave way, owing to an unusually large body of water coming down, combined with the decayed state of the wood-work ; in consequence of this, a portion of the water-course fell with a tremendous crash, making a gap nearly a mile long, and, of course, stopping the machinery of the crushing-mill till the damage was repaired. Before entering the mines, lights were handed to each individual, and it was with some surprise, that I saw excellent mould candles used by every miner at his work, as good as the best *Kensingtons*

that are burnt on a gentleman's table at home; but this surprise was removed when I was told that they came from Russia, at a very cheap rate. As we entered these wet, dripping and dirty burrows, the instantaneous change of temperature quite startled me, our breath being at once condensed into a thick vapour. At the mouth of one of the mines lay a large quantity of ice, which had been taken from the interior, where it was continually forming. I found these underground works extending for a considerable distance, so that if a person had not a very intimate knowledge of the intricacies, he would inevitably lose himself in this labyrinth. As we proceeded, the hollow sound of blasting echoed along the caverns; and once, so great was the thundering concussion of the air, that several of our candles were puffed out, and I felt as if struck by some invisible and shapeless body, with such force as partially to take away respiration. Large drops of water, that had either condensed upon the roof above, or percolated through the superincumbent soil, fell upon us as we passed, and rendered the floor all sloppy and muddy.

It is seldom that casualties happen in these mines, except from the accidental explosion of the blast-holes when they are filling with powder, and then it is sometimes attended with dreadful consequences. The carelessness of the workmen is reprehensible in the extreme; an instance of this was told me, which, at the same time, showed their extraordinary presence of mind. While some miners were filling a hole with powder, others amused themselves close by in kindling some tubes containing the same material, and this they did above a large box full of them. As might be expected, a few sparks

fell into this box, and set off all the rest, exploding like so many squibs. The individuals employed in "tamping" the hole, on perceiving this, immediately *seated themselves above it*, thus employing the only chance that remained of saving themselves and their careless companions from destruction. Another similar case of recklessness was mentioned to me. Near the works is a powder-house, or magazine, built, as usual, of wood. One of the Englishmen was passing it lately, and actually saw a number of natives, who, having marked the wall of the building, were about to fire at it with their rifles!

The roofs of all the mines, except one, appear to be firm, and, as far as I could learn, there is no danger from gas of any kind.

I picked up a few specimens of carbonate of lime, in crystals, encrusted with iron and copper in beautiful spiculæ; this I found occurring in cavities, some of them as large as my head; but it surprised me not a little to observe some of these specimens, from the size of a hen's egg to that of my fist, lying loose in these cavities, without any trace of attachment either on the sides or on the crystals, though I examined them most minutely. I also noticed single crystals, about an inch in length, lying loose in a similar manner; such as these were most beautifully perfect in their formation, and symmetrical in their shape: bitter Spar was likewise found, and beautiful specimens of arseniate of Cobalt; while spicular Iron, iridescent Copper, the blue and green Oxyde, or Malachite, are common. I was also shown a vein of very small coarse Amethysts: great quantities of Asbestos, and some Epidote occur; the former is in such large masses,

especially in a lode of Copper ore, (opened a day or two before I went away, and likely to prove very rich) that Mr. Crowe intends making the bottom of a furnace of this substance. The bottoms of the present smelting furnaces stand the necessary heat very ill, and this plan of lining them with Asbestos appeared likely to answer.

Wednesday, 27th.—I rose betimes, and taking my sketch-book, delineated, as well as I could, the falls in a river emptying itself into Kaafjord bay, not far from the works. They were very fine, and reminded me much of those upon the river Lochy near Killin. The water descended in a triple fall, the uppermost being far the grandest, sending forth a great deal of spray, by which I should have been presently wetted quite through, if I had not hastened to withdraw from under its influence. A ledge of rock near this spot had been for many years selected by a pair of fishing Eagles as their Eyrie, where they had brought forth their young in safety, regardless of the loud echoes of blasting on the opposite side; and this was so far fortunate for the birds, as I went to the place with malice prepense; and had the young or eggs been there, could easily with the help of a ladder or rope, have succeeded in obtaining them, and probably have shot the intrepid parents also, whom I frequently saw afterwards, hovering near the spot, on the look-out for fish.

At these falls, a number of salmon nets, called *stangles*, are set at the mouth of the river; these are formed by a barrier being thrown across the stream, in which are interstices, in each of which is placed a net, with its opening kept *down* the stream, and constructed on the principle of a wire cage mouse-trap. The salmon, of course, hasten to the interstices, unsus-

pecting the danger beyond, and passing through the narrow and gradually contracting hole, find themselves "caught in an evil net," where progress and return are alike impossible. When the fisher comes, he lifts the frame-work, net and all, and having taken out the fish, replaces the snare. This contrivance, if properly constructed and set, is calculated to entrap every fish in the river in their passage upwards: yet as I have myself seen large salmon caught *above* the *stangles*, I conjecture that a temporary or partial removal must take place, with the design of allowing some to escape. A curious fact was mentioned to me, that char and trout are seldom or never captured in these nets, though both abound and attain a considerable size. I may here observe that the mode adopted by the Indians of North-West America, for catching salmon in the Columbia river, as described by the late Mr. David Douglas, is almost precisely the same as in the Kaaford river.—(See Memoir of Mr. Douglas, published in the *Companion to the Botanical Magazine*.)

On entering the woods, I noticed the *Linnæa borealis*, called by the Norwegians *Windgräs*, and growing in even greater profusion than I have ever observed it before or since, in the fullest flower and delicious fragrance; but the mosquitoes severely punished all those who invaded their territories, adhering so pertinaciously to our clothes, that it was quite impossible to keep them off. Smoking certainly prevented these blood-suckers from attacking my face, but they contrived to puncture through trowsers and drawers, and, laughable as the fact may appear, it is no less true, that I have seen these little creatures, when they came to try a tougher part of the cuticle of my hand, prop their slender and flexible

trunks, by pressing a fore-leg on each side, just in the same way and upon the same principle that a carpenter grasps a nail betwixt his fore-finger and thumb to prevent its bending. When permitted to suck their fill, which generally requires about a minute and a half, the mosquitoes will gorge themselves to such a degree, as to be frequently unable to move, and, turning on their backs, remain so till they die. The mosquito veils, so frequently recommended, I find to be worse than useless, at least in my case, as prohibiting me from either making use of the gun, or sketching, or looking about; such a veil must also be kept entirely clear of the face, or these insects puncture through it in a moment; and I was by no means inclined to try the other remedy, of smearing my countenance with tar ointment. The fondness of mosquitoes for blood, in some countries, is a highly curious fact in their natural history. In England, though we have plenty of the identical species, *Culex pipiens*, or the common gnat, we are not bitten, or at least very rarely.* Blood cannot, I think, be their natural food, these creatures being found, in the greatest abundance, where no animal exists which can thus supply them. Besides, as I before mentioned, they frequently, if not always, die, when permitted to suck their fill.

In returning home, I noticed a large number of fish-heads hung up before some of the houses; upon enquiring the purpose to which so great a quantity could be applied, I learned

* A similar immunity is to be observed in England, with respect to sharks. It is a well known fact that they do exist on our own shores, (see Yarrell's British Fishes) but they do not seem to be endowed with the taste for human flesh that they have in other latitudes.

that the following extraordinary use is made of them, which though I at first supposed to be a joke, I afterwards found was perfectly true. These fish-heads are collected against winter, when they are employed as food for the cows, and, if I remember rightly, for sheep also; they are boiled to the consistency of thick soup, and as much horse-dung as can be obtained, is added to this mess, of which the cattle are remarkably fond, and, provided they get a sufficient quantity, they thrive well upon it. The poor people, as Mr. Crowe informed me, are so eager to obtain the latter precious ingredient, that they crowd round the mining company's stables, run after the horses, and almost catch the droppings before they reach the ground. The managers have been offered a high price to contract for the stable-cleanings. This is the less to be wondered at, when it is considered how large a portion of aliment passes almost unaltered, through the stomach of a horse.

“ A nauseous dole
Of voided pulse or half digested grain.”

Cows, even in England, are fond of stable-litter: and in these parts of Norway, where hay is very scarce, this is a most economical plan. Indeed, without it, the cattle could not be kept through the winter.

Thursday, 28th.—After making a long excursion this day in pursuit of birds, I returned home with very little success. I saw a good many flocks of our winter friends, the *Fieldfares*, with their young, but could obtain no eggs, the young birds were so tame that I captured several with my hands, but the old ones were quite as shy as they are in England, if not more so.

Friday, 29th.—Accompanied by Captain Thomas, who has the charge of all the mines, as well as bearing the office of chemical assayer to the Company, I went up the country to-day to shoot and look about. Off we set, determined to face the mosquitoes to the last drop, and passing the falls, proceeded up the river, through a beautifully wooded district, interspersed with marshy ground, where the *Rubus Chamæmorus* grew in great plenty, bearing abundance of delicious amber-coloured berries. The Norwegian name for this fruit is *Moltebaer*, or *Manyberry*, in allusion to its clustered appearance. We saw numberless dead *Firs*, some erect, extending their scattered and barkless branches above the living trees, or lying scattered on the ground, while others were half sunk in the bog, and overgrown with moss and rushes. The different species of *Pyrola* just reared their pretty delicate flowers above the herbage. The *Crowberry*, *Krakebaer*, grew in the utmost profusion, bearing extraordinarily large and grateful fruit. A quantity of timber was felled, and ready for floating down to the falls, either to build houses at Alten with it, or to be sent to Hammerfest. We continued our ascent of the river till we came to Matthiesen's Lake, where my hopes of seeing many and scarce waterfowl were grievously disappointed. We crossed the Lake in a little canoe-like boat, in the bottom of which we were obliged to sit, for fear of capsizing it, as I thought that our dog, who was continually on the *qui vive*, would have done. On the opposite side we landed at a marshy spot, where there were plenty of wild ducks. The old birds were in general too cunning to let us come within gun-shot, but we soon killed a great many Flappers of the *Golden-eye*, *Teal*, and common *Wild-duck*,

as well as a young *Merganser*, so that as far as mere sport was concerned, our time was not lost. We were dreadfully tormented with our customary plagues, the mosquitoes, which are peculiarly active on these marshy spots.

On one occasion when we had concealed ourselves among some low willows, growing in about two feet depth of water, in order to obtain some old ducks, our faces were soon covered with hard swollen lumps, and became so sore, red, and stiff, that we could scarcely get our eyes open. While I was in this state, I saw,—certainly what I never expected to meet with during the summer season,—a covey of *Norwegian Ptarmigan*, called by the natives *Ripa*. Eager to pursue them, yet half blinded, I darted off, calling to Captain Thomas, “the Ripa, the Ripa,” and presently plunged into a deep hole of mud and water, whence I was unable to extricate myself till my companion came and assisted in pulling me out. We then both went to work more calmly, beating every bush and cover, but without success, as these birds, after being once disturbed, always sit very close and can hardly be put up without the aid of a very expert and active dog. I was quite struck here with the beauty of the *Pedicularis Sceptrum Caroli*, called by the people, *Karl's skefter*, it grew certainly not less than three feet high, the upper part for two thirds of the length of the plant, being covered with the spike of golden-coloured flowers, which rendered it a most brilliant and truly sceptre-object, as it reared its lofty head above the surrounding long grass.

On our way home I shot an Owl—*Strix Lapponica*,—the *Katyogle*, or Cat Owl, of the Norwegians,—a bird that peculiarly merits its name, so noiseless, so soft, so hypocritical are

all its actions; and having got, at last, a brace of *Ripa*, I was very well pleased. There are two kinds of *Ripa* here, the *field* or *mountain Ripa*,—*Tetrao rupestris* of Sabine,—and the *Dal* or *wood Ripa*,—*Tetrao Saliceti* of Temminck. The latter is the larger bird, and lives, as its name implies, on the low grounds, while the former inhabits the summits of the mountains. I never saw the *T. rupestris* alive, nor, though I offered a high price, could I procure a specimen, of which I had been very desirous, in order to compare the two species. I may here mention the extreme difficulty that I always found in inducing the Norwegian peasant to do any service of this kind. In summer, the people are mostly engaged in the fishery, at which work they can make as much money in three months as will support themselves and their families during the rest of the year. Their time is therefore valuable, and they set a high price upon it. Moreover they are a most supine set, totally unconcerned about bettering their condition. Mr. Crowe did not think it possible to induce them to send their children, who had no employment whatever, to gather the *Lichen tartareus* and *L. pustulatus*, which yield the famous *Cudbear* dye, and which I was peculiarly desirous of obtaining for Mr. M'Intosh of Glasgow, the celebrated manufacturer of this dye, and perhaps still better known as the inventor and fabricator of the waterproof cloth which bears his name. All the Norwegian peasants care for, is to get plenty to eat, drink, and smoke, during the winter; if they have this and nothing to do, they are satisfied.

When, on recrossing the Fiord with my treasures, I opened my bag to count my game, to my surprise I found the *Katyogle* alive and comparatively well. He sat on my finger,

preened his ruffled plumage and seemed dazzled with the light ; when, all of a sudden, as I was admiring him and hoping that, with care, he might recover of his wounds, he opened his wings and darted off, skimming along the surface of the Fiord and was soon fairly out of sight, leaving me to look as foolish as may be imagined. I found a considerable quantity of ripe alpine Strawberries, growing among the rocks: they are far less than those raised in our gardens, about as big as a small pistol bullet,—but a much higher flavoured fruit.

Sunday, 31st.—After breakfast, Mr. Crowe's house was throwu open to all the English in Kaaford, who soon filled the room to hear divine service ; and Mrs. Crowe, who was, by this time, “ as well as could be expected,” made her appearance. This lady is a native of the country and deemed one of the belles of the North of Norway. De Capell Brooke's likeness of her is far from doing justice to her fine complexion, beautiful light hair, and charming features.

The Sunday is here considered to be over at six in the afternoon. The storehouse is then open, and it is the busiest time in the whole week, for as the hours are not counted as working ones, so the people almost all make a point of getting *pisk* or drunk on the Sabbath. The Mountain Lapps generally come down on that day with their Deer, from their summer encampments, or *Rehn-bye*, to attend church, and afterwards make purchases and become intoxicated. I took this opportunity of sketching the particular dresses of these people ; they did not like at first to be made the subject of a drawing ; the cause of this originates in a superstitious idea, which is pretty common among the ignorant, that having the likeness

of any person gives the possessor a power of bringing harm upon the individual whose similitude it is. This was of course the true reason why one man refused, though I was much amused at the objections he started, when I expressed a wish to sketch his wife, a mountain Lapp, who was a remarkably characteristic specimen of her national peculiarities. "No," said the husband, "it must not be: she has not her gold and silver ornaments on." After a while, however, and what was of more effect than the persuasions of Mr. Woodfall, after a few glasses of rum, he consented; and when I showed him her likeness and costume, he exclaimed, "that it was as like as if looking into a looking glass;" and he was particularly delighted at hearing that my drawing was going to England, where it would be shown as his beautiful consort. The man was already very proud of her, and this circumstance raised her value at least fifty per cent. in his eyes. (*See Plate III. fig. 1.**)

An occurrence took place here this evening, as it does every Sunday, which I was very desirous of witnessing, and this was a Quān dance. It was held in a house close by; and having persuaded Captain Thomas to go also, we proceeded thither. No dressing indeed was required; thick boots and a pea-jacket were my equipment; and all the instructions I received were, to carry plenty of tobacco. So, pipe in mouth, I sallied forth, through mud, wet and rain, walking into the apartment without a whit of introduction, and there I already found the *Harriet's* Skipper, skipping round the room with a Quān damsel, whose flat and shapeless face was aptly com-

* Where the female figure represents the person in question.



1



2



4



5

W. H. deo

W. Fitch del.

pared to a model in putty, which had been sate upon before it had hardened. We squeezed our way up to the top of the room, where there was a large fire, over which five or six old women were cowering, one of whom busied herself in stroking a child's head, and ever and anon committing to the exterminating flames some unlucky straggler which she captured there. The men had, almost all, birch pipes in their mouths, and these they did not always relinquish while dancing. Fearing to give mortal offence if I departed without joining in the evening's amusement, (I do not mean the ancient crone's occupation,) I looked round for the most cleanly girl in the room, and began waltzing till I could hardly stop myself, being regaled the while with delectable odours of salt-fish and ill prepared deer-skins. I was astonished to see both men and women swallowing large draughts of cold water, while in a state of profuse perspiration, and seeming to receive no injury from a practice which would give most Englishmen inflammation in the bowels, or something of the kind. These poor creatures were certainly more innocently employed than their neighbours at the store, not a drop of spirits being touched among them. We had not been long in the house when we were summoned back to Mr. Crowe's where the ladies had got up a dance and were in want of partners, and these companions being far more agreeable than the Quān belles, and the mode of dancing less violent, we kept up the festivity till far into morning, and went to bed sufficiently tired.

Monday, August, 1st.—A party was formed to see the mines, and I started with them, but soon proved a deserter, being anxious to sketch the environs of Kaafjord, the Bay,

Works, &c., (*see Plate 2.*) during which time my friends having completed their subterranean researches, emerged from the bowels of the earth, the ladies having a most picturesque appearance in the miners' caps and cloaks. I then rejoined them, and we returned home.

Just at this time our French acquaintances arrived, having accomplished their excursion to the North Cape, and being desirous of visiting the copper mines and works at Kaafiord, whither they immediately proceeded, and were highly pleased, especially with the process of purifying the copper, as performed in the laboratory of Captain Thomas. They afterwards dined at Mr. Crowe's hospitable board, and spoke of Bossikop, which they had been visiting, and whither some of our party had already gone. I followed shortly after, in company with my kind friend, Captain Thomas, having persuaded Mr. Walker to come also. From Kaafiord to Bossikop is about ten miles by water, and the people seldom think of travelling, in summer, by any other means. We therefore got into a native boat, one of the Norway yawls, and a more comfortable conveyance can hardly be imagined. I shall endeavour to describe these vessels. They are very light, and at the same time, particularly strong, not difficult of management, nor easily upset; they carry a large square sail in the very middle of the boat, the stern-sheets are also large and without any after-thorts. The timbers are so tightly put together that not a drop of water ever makes its way in. When used for short excursions, Reindeer-skins are laid in the bottom of the boat, and the traveller rolls himself up in his *Paesk*, and puts on his *Skall-komügers*, while the heap of baggage,

similarly enveloped, serves for a pillow, and he has another Deer-skin above him. Thus, nothing can be more comfortable than such a *gîte*. The tiller, which one might suppose would be in the way, is quite differently contrived; at first it projects over the side, and then, with a joint, it turns along the gunwale, and is held by the man who manages the sail and sternmost oar. He sits looking *forward*, and rowing one oar, while the others handle two oars, and sit looking *aft*. Accidents seldom happen, unless the men be *pisk*. The fellows are clever, and their craft both sail and pull fast. The thole-pins are curious contrivances: to make these, the boat-builder selects a crooked birch branch, and fixes it to the side of the boat, with one of the limbs of the branch sticking above the gunwale, and pointing aft; the oar is tied to this, and works underneath it, thus obviating the necessity of removing the oar when the rower requires to use his hand for something else. The oar is short, light, and more paddle-shaped than ours. The boats are turned up at both ends, about four breadths of planks sufficing for them, and these are fastened together by wooden pins, instead of nails. (*See Plate III. fig. 2.*)

We slept very comfortably, till roused by the boat thumping against Mr. Vendal's wooden pier, at Bossikop. This was about half-past two, A.M. No one was to be seen, but proceeding to the house of Madame Klerck, we found it unlocked, though the inmates were all in bed, and asleep. Captain Thomas went to rouse some slumberer, who should get our beds ready, and our hostess, as soon as she heard of our arrival, sent down wine and cake, after partaking of which, we retired to finish our night's rest on shore. Madame Klerck is the widow of a highly respectable merchant at

Bossikop. The regulation in this country is, that in order to secure the exclusive right of carrying on mercantile transactions in any district, the individual must become a *Giestgiver*, that is, must entertain all strangers at a certain fixed rate; this rate is, of course, much too low to repay the trouble and expense thus incurred, and is therefore a kind of tax for the privilege; and Madame Klerck, though she *let* the business to the hands of another, is compelled, either by her own hospitable feelings, or by law, to continue the custom, which she does indeed with the greatest possible readiness. The couches we went to, were quite novel to us; the beds and pillows being of *Eider-down*, and the coverlids stuffed with the same material. This latter article was at once warm and light, but we sunk so deeply into our beds, that it appeared somewhat problematical whether we should ever rise from them in the morning.

Tuesday, August 2nd.—We were called from our *downy* slumbers by the entrance of a damsel, who offered to each of us a cup of strong coffee to sip in bed; not as a substitute for breakfast, but simply to serve as an awakening draught and to rouse us thoroughly. This custom we found to be universal in all Norske families; my father had witnessed it in Iceland; and as was the case there, so here the best looking girl in the house is selected to perform this office. It is certainly not unpleasant to see a fair-haired blue-eyed child of the north, the first thing in the morning, before one is fairly awake, and to sip the refreshing coffee, which is proffered with such modest grace, as induced some of us to doze a little longer, in hopes of being favoured with a second visit. Having leaped from our couches and commenced dressing, we, who

were strangers, felt not a little abashed at seeing our Hebe return for our empty cups before we were half clad, and wished ourselves back in bed; but she walked quite unconcernedly past us, reminding me forcibly of the scripture expression, "thinking no evil," for it seemed to be a matter of no moment to her whether we were dressed or not; and when we said "mony tak," she quietly curtsied, and replying "welbekommen," went away with our cups.

Madame Klerck was waiting for us when we came down, and cordially welcomed us to Bossikop. I recognised her as one of Mr. Crowe's late guests, whose name, as well as that of many others, had escaped my memory, or defied the powers of my tongue, albeit habituated to Scottish appellations, to pronounce, while at the same time, the appearance of the individual's person was faithfully retained.

Our French friends had also arrived, and we all seated ourselves to a "*Frököst*," (breakfast) which was of a pretty substantial nature, and then, taking our guns, accompanied M. Le Baron Sibouet to visit the Ripas copper-mines, situated upon the mountains of the same name. Our course lay over a most beautiful and level tract of country, striking through a portion of the great Alten forest, till we came to an open plain of several miles in extent, clothed with tufts of *Vaccinium Myrtillus*, the *Blaebaer*, (in Scots, *Blaeberry*) and of *Kräkebaer*, (*Crowberry*) among which were immense numbers of ant-hills, formed of the twigs and small leaves of the latter plant. The Formic acid smelt quite strong, and I was afterwards told by a native of Sweden, that in the central parts of that country they often boil these ants, and, straining the liquor, obtain a kind of weak vinegar. The soil here was light and sandy,

and seemed to be all of an alluvial character. We saw several beautiful *Peregrins Falcons*, but these birds kept a true "hawk's eye" upon us, so after a fruitless chase of an hour or more, we continued our way, and soon reached the noble Alten river, a broad, deep, and rapid stream, which is continually undermining its banks, and encreasing the size of its channel. My most sanguine expectations were surpassed by the loveliness of the scenery. I sat down to attempt a delineation of its highly picturesque beauties, but the more I tried, the farther did I seem from attaining my object; for, after finishing my sketch, and comparing it with the lovely original, I felt utterly disheartened at observing how it failed in conveying the least idea of the brilliant and living reality. On this side of the river, I mean about the spot where I sat, there were no mosquitoes; for what reason I could not tell; but one or two places were equally exempt, and I vainly puzzled my brains to account for the circumstance of the absence of these plagues: no difference being apparent, except that the localities in question are invariably and pre-eminently the most beautiful I ever saw. The native name for Mosquito is *Mouga* or *Mouge*, an appellation as like the Scottish word *Midge* as is the insect's propensity for human blood, and both words evidently derived from the French *Mouche*. Nor are the natives of Norway themselves by any means exempt from the attacks of these persevering phlebotomizers. I remember to have seen one countryman perfectly blinded for a time; I prescribed for him Goulard-water, with excellent effect. The mention of mosquitoes calls to mind the *Furia infernalis*, of which both Linnæus and Dr. Clarke speak; but their horrifying tales are quite scouted by the

Norwegians, who attach no credit to either of these eminent Naturalists' relations.

We were ferried across the Alten in long canoes, one man standing on the bow, and another on the stern, and punting us over, while we lay huddled together at the bottom of the boat. We passed a number of stakes or posts, stretched across a ford on the river; one post was set upright, while another was laid obliquely on the top, with its lower end driven into the bed of the stream; upon these piles the people fix their salmon-nets, but in what manner I could not learn. As soon as we had reached the other side, the *Mougas* attacked us with renewed vigour, and our guide was sadly annoyed with them. This man, a Russian by birth, had been too long absent from his native country to be able to speak its language perfectly, and he was even more deficient in every other; a very little Norske and Russ, some Quānish, and about twenty words of English, completed the vocabulary in which poor Prakopen gave vent to all his wrath against the mosquitoes; and so truly ridiculous was the jargon he uttered, that all our own sufferings could not hinder us from laughing immoderately. This fellow had married a Quān woman, of whose beauty he was so proud that he took me one day to see her. I could not resist the temptation of joking with him, and telling Prakopen, whose eyes sparkled with pride, that his spouse was more resplendent than the sun, and more lovely than the moon; but to speak plainly, she was just like her countrywomen, inconceivably ugly.

In this part of Norway, an excellent plan is adopted for carrying luggage and loose articles; they are deposited in a kind of flat square basket, formed of thin slips of Fir-wood,

light and yet strong; cords, which pass over and under each shoulder, attach this basket pretty firmly to the back, much after the fashion of a soldier's knapsack, thus the arms are left free and unencumbered, by which the bearer is enabled to assist himself in climbing the hills, &c.

After shooting a number of Ducks and Flappers in the marshes, we proceeded up the Ripas mountains to the mines. These mines, which are but recently opened, and belong to the Alten Company, are peculiarly rich, the ore yielding a much larger per centage of metal than those at Kaafjord.

We rested in a *Gamme*, or Lapp hut, and I no longer wondered at the prevalence of sore eyes among the lower classes—a circumstance which I had, previously, chiefly attributed to the dazzling winter's snows—the hut being so full of smoke that I could hardly breathe. The roofs of the Ripas mines are very low, so that, stooping considerably, I still received some contusions on the head. In these mines there are several *shafts* which descend a considerable depth. I found pretty specimens of red arseniate of Cobalt, and of green carbonate of Copper, or Malachite. After exploring the mines we returned to the River, and observed Prakopen issuing from the ferry-house and devouring *raw* Salmon. He offered me some, assuring me that it was quite freshly caught, and "*meiget gut*." This fish is called *Lax* here, as in Iceland, and I should have cheerfully tried how it tasted uncooked and uncured, but that I could not resolve to eat it after it had been fingered over by a filthy Russ. Glad were we to obtain a temporary respite from the mosquitoes; M. Le Baron exclaiming, "*à bas les Moustiches*," Prakopen denouncing them as emissaries of *Gammel Eric*, (Old Nick) and we all

wishing that they were like the Egyptian locusts, laid in the depths of the Red Sea.

The *Pedicularis Sceptrum Caroli* was abundant in this vicinity, growing in similar localities to those where I had first seen this interesting plant; there was also a great variety of *Willows*, which I gathered, hoping they would find a place in the rich *Salicetum* of His Grace the Duke of Bedford, binding up their ends in moss to keep them moist, till Mr. Christy should see them, and determine whether they were worth the conveyance home. I also collected such ripe seeds of different *Willows* and other plants as I could find, pocketing, doubtless, in my ignorance, much trash and plenty of duplicates. A few *Alders* grew in moist places, and abundance of *Wild Currants*, very sour and bad, and infested with a dusty red blight, similar to what attacks our Gooseberry, only more powdery.

When we reached Bossikop, we found that a number of ladies had arrived, together with Mr. Crowe, Mr. Christy, the Bergmaster, Mr. Galt, our Captain, and Dr. Greisdale. Our party, however, dined alone, and I was not sorry that we did so, as I should have been utterly ashamed to let any one see the inordinate appetites we displayed, and the consequent clearance of provisions that we made.

On adjourning to the withdrawing room, I found Frau Grüntwy, Yungfrau Stabell, and the *Amptmaninde*, or Ampman's lady, singing Norse songs to the accompaniment of the piano-forte. They displayed great taste and feeling in their performance, and many of the airs were very pleasing, especially that mentioned by Dr. Clarke, of which the words begin :

For Norge Kiempers Föde land,
Vi denne Skaal udtomme.

I had thought that in these hyperborean latitudes the art of music would have been neglected, so that it was quite an agreeable surprise to me to find that both here and at Hammerfest there is a great deal of taste displayed for this delightful amusement. Some of the old national strains appear quite to inspire the people, and even a stranger (I, at least,) could not hear them unmoved. The Lapps do not sing, except a kind of howling incantation which they chant against the Wolves, be so termed; four or five words uttered incessantly, at the very top of their voice, till the lungs are collapsed for want of air, compose all the music with which these people are acquainted.

The Fins or Quäns, again, sing, and are rather musical in their way; and the Russian sailors were continually exercising their voices, especially in the evenings; at such times, when many of these people joined in the strain,

“ the sounds, by distance tame,
“ Mellowed along the waters came,
“ And lingering long by *Fiord* and Bay,
“ Wailed every harsher note away.”

I have often stood and listened with pleasure, under such circumstances, to lays which would perhaps have proved harsh and monotonous if they had sounded close upon the ear. Thus

“ distance lends enchantment ”

to sound as well as sight.

August 3rd, Wednesday.—A party were again proceeding to the Ripas mines, but unwilling to be quite demolished by

the mosquitoes, and thinking I might spend my time more agreeably in the pursuit of Birds and fine scenery, I declined accompanying them, and set off in an opposite direction, first, however, going to visit a poor woodcutter who had wounded his leg with a hatchet. Mr. Walker accompanied me, but previously we found it needful to obtain an interpreter (*taalk*.) who should also serve as a guide (*vappus*.) A Swede, who had been some time in England, and spoke our language very fluently, offered his services, and among other things he communicated to us his regrets that he had been so foolish as to marry a Norske woman, by whom he had several children, and was thus prevented by law from returning to England, where he wished he could settle, as he felt confident he could soon make his fortune! I found my patient had received a severe cut, the bone having been chipped. Upon enquiring what application had been already used, the people showed me a substance which they procure by boiling the young tops of Fir, sliced into small pieces, thus extracting the juice, and making, in fact, *Riga Balsam*. No one had given them any directions how to prepare or apply this substance; “but,” said they, “our forefathers always used it, and so do we.” This little discovery in Pharmaceutics quite pleased me, and with the freely proffered milk, dried salmon, and Rye-cake, together with the sincere and still more acceptable “mony tak,” I thought myself well repaid for the expense of a guide, and a few miles’ walk.

Acerbi, I find, has noticed this Norwegian mode of dressing wounds; when at Alten he searched the empty dwelling of a Lapp family, “and found nothing,” he says, “in the way of curiosity, but a box of Rosin: this juice issues from the Fir-

tree, and the Laplanders make an ointment of it for dressing wounds."

The house of my patient was situated on the banks of the Alten river, just at a spot where the stream undermines its banks, and carries away every year three or four yards of soil, depositing as much sand on the opposite side. Our guide was a very shrewd and intelligent fellow. To my enquiries about the *Capercaillie* (*Tetrao Urogallus*) he replied that the cock bird of this species is now comparatively scarce in the neighbourhood, and not known by that name at all, but is called *Stor Függle*, the "big bird," *par excellence*; while the hen, which is far more common, goes by the name of *Tioure*. Wolves are also rare to what they have been, not being seen in droves, but only one or two at a time; and Bears hardly show themselves in summer, so that our hopes of an encounter with Bruin were quite disappointed, whom the natives call *Björn*.

Mr. Walker having proceeded to the other side of the river, in order to entomologize, I planted myself on the bank of the Alten, to make a sketch of the surrounding scenery; when, all of a sudden, the earth on which I was sitting gave way, and with a couple of as complete summersets as were ever performed at Astley's amphitheatre, I was precipitated into the stream, where, had I been unable to swim, I should have met with a very cold-water grave. "*Facilis descensus*," thought I, as my sketch-book, containing all my previous journal, notes, and most of my drawings, &c., went gallantly sailing down to the Fiord, whither feeling no inclination to follow it, I struck out my arms and legs, using my utmost endeavours to extricate myself from this icy bath, well know-

ing that my most powerful exertions were not more than sufficient to carry me, encumbered as I was with all my clothes, komager-boots, and a well filled shot-belt, across a broad, deep, and rapid river. At last I emerged, but at the bank opposite to that from which I had entered. To have ascended the latter, would, indeed, have been impossible, as the bank dipped abruptly from a height of twenty feet into the river. The dog, Lion by name, who had plunged boldly into the river after me, was no where to be seen, and I began to feel much at a loss what to do, for the idea of returning by the way I came was by no means agreeable; moreover, the mosquitoes, now that I was on this side of the river, began to torment me desperately; my tinder was wet, as well as my powder, so I could not smoke. After a while I espied a countryman, and requested him to ferry me across, but whether from unwillingness, or from ignorance of the meaning of my broken Norske, he continually replied, "Nae, nae," though I backed my eloquence with the persuasive argument of a wet and ragged twenty-four skilling note, which I extracted from my soaked pocket, and gave him to understand that it should become his if he complied with my proposal. Finding that no help could be obtained from that quarter, I set to running up the river in search of Mr. Walker, when to my great joy I espied Prakopen trudging along loaded with the provision basket which belonged to the Ripas party. However, the rights of property weighed with me but little, under my present shivering and half-drowned circumstances; and first the *schnapps* and then the eatables suffered considerable diminution, which was actively prosecuted when Mr. Walker arrived. After being thus re-

invigorated, Mr. Walker and I recrossed the Alten's frigid waters, and to my great satisfaction I found my gun lying safely where I left it, and Lion sitting beside it.

The party from the Ripas mines had arrived at Bossikop before us, and were proceeding to supper at the Fogedgaard, with the widow of the late Foged. As soon as I had changed my wet garments, I followed them, and found a large number of persons assembled; but as Captain Moyse was going to send to Kaafjord that night, I accompanied the boat, wishing to obtain from on board the *Harriet*, some more drawing-paper, powder and shot, &c. I therefore wrapped myself again in my paesk, and lying down in the bottom of the boat, soon reached our good ship, where, after executing my own errands, and the commissions of my friends, I passed the rest of the night.

August 4th, Thursday.—I was early stirring this morning, and summoning the boatmen, departed for Bossikop. The passage was very rough, but proportionally rapid, and the little Norwegian skiff dashed off

“like a thing of life,”—

and that “thing” a stormy Petrel,—over the crested billows; and when we neared the pier at Bossikop, the Captain, who awaited our arrival, had expected to see ourselves and the boat go down together,—but his fears in this matter only proved that he knew the seaworthiness of the Norske boats, and the skill of their mariners less than his own, for we gained the landing-place without shipping so much as a drop of water.

When I reached Madame Klerck's house, I found that she and the other ladies were going to the *Sandfaldet*. This

place, as its name implies, is a Fall of Sand,—a hill of that substance extending like a tongue into the Alten river, into which it dips abruptly; it is beautifully clothed with trees, except at the extremity, where it is very steep and composed of gravelly sand, forming a striking and prominent feature in this view of the river.

I cannot say that my pleasure in this excursion was peculiarly enhanced, when Consul Crowe, with a malicious look, promoted me to escort a rather stout lady, who neither spoke nor understood a syllable of English, and my mortification was increased by the glee with which Mr. Christy kept ahead the whole way, accompanied by our kind-hearted landlady, while he ever and anon cast back a triumphant glance at me, who toiled on, dragging my heavy and silent partner. In my secret soul, I formed the determination to give her the slip on the first opportunity, and leave her to seek some more gallant companion, who should be able to devote his whole attention to her, instead of wanting to look about him, make sketches, and talk.

We proceeded through a very thickly wooded tract, forming, in fact, a part of the great Alten Forest, covered with Scotch Firs, the Norwegian Pine being unable to withstand the winter's cold of these districts, until we reached *Kobberstadt*, a word signifying the Copper City, but why so called I could not discover, as no copper exists anywhere in the neighbourhood, the whole being an immensely extensive and deep tract of alluvial soil, nor is there so much as a town or even a village in this spot, only one rather small dwelling, with its outhouses. The country is very pretty, and we here halted to partake of some Chocolate and Filbunke. In their par-

tiality for pots of flowers placed in their windows, the Norwegians evince quite a Cockney taste ; I have been surprised to see plants of considerable rarity in the cottages of these peasantry. *Clarkia pulchella*, for instance, which only twelve years before, had been introduced by the lamented Douglas from the shores of the Columbia River in North West America, graced the cottage at Kobberstadt, and I have even observed this delicate and singularly shaped flower in many dwellings of a very inferior description.

Many plants, far from common in our more favoured clime, were cultivated in Madame Klerck's house, her especial pet being a dwarf pomegranate, of the name of which she was ignorant. Its Norske name neither Mr. Christy or I knew, so turning in a Norwegian Bible to Solomon's Song, we at once found it to be *Granat Apfel*, which discovery pleased our kind hostess greatly, raising the little shrub highly in her estimation.

Proceeding a little farther, we came to a plain, about four miles in length, and not quite half a mile in breadth, perfectly flat, and as smooth as a well kept bowling-green, bounded on one side by a series of steep declivities or sand-falls, about ninety or a hundred feet in height, fringed with birch trees and crowned with stately firs, while on the other side lay the deep wood whence we had just emerged. One would have almost thought, so regularly did the trees mark the boundary between themselves and the plain, not a single fir or birch straggling into the smooth green-sward, that some giant had cleared it for his avenue. At one end, this elongated plain took a turn, thus hiding Kobberstadt from our view, while glancing forward to the very extremity, we caught sight of

the broad Alten River, and the Sandfaldet itself. The herbage here was peculiarly rich, and not a mosquito came to interrupt our admiration of nature's charms. Madame Klerck said that the snow melts away from this place so speedily, that vegetation is always much forwarder here than anywhere else in the neighbourhood, so that the verdure is lovely, before any signs of winter's departure take place elsewhere. We now began the ascent of the *Sandfaldet*, and I heartily wished that my ponderous companion was not appended to my arm. No more than two persons could walk abreast on this narrow pathway, and we formed a long train, when suddenly a noble Sea-Eagle, who had been sitting on a dead tree close by, soared directly past us, within ten yards, and quite calmly! What would I not have given for my gun at that moment? Never before had I gone abroad without carrying it, slung across my shoulders, and I sorely fear that a few rather uncomplimentary expressions dropped from my mouth against the ladies, on whose account I had left it behind; but fortunately, for me, these speeches were not understood by the parties against whom they were levelled. Soon, however, I recovered my lost temper, and thought better of my fair companions, for when we reached the top, we found an excellent collation prepared, which Madame Klerck, with her usual kindness and forethought, had provided, and to which we all sat down with pretty sharp appetites. The view was splendid in the extreme, whichever way we turned our eyes. The Alten River wound at a distance of about 400 feet beneath us, its surface unruffled, save by the occasional leap of a large Salmon, whose burnished scales glittered in the rays of the declining sun. On the other side we saw the Ripas Mountains, rising from rich fertile

plains and vallies, while to the left the river divided into shallow sandy mouths, and ran into the Alten Fiord, which, far in the distance, was agitated by a squall of wind and rain. Every object, far or near, was seen with the utmost clearness, spread at our feet as distinctly as in a map. I thought to myself, Oh ! where's the artist whose pencil could do justice to such a scene, so splendid as a whole, and embracing such a variety of views ? There was the mountainous and rocky, the valley and the plain,—the richly wooded and the barren sandy,—the placid stream and the stormy fiord.—I never beheld such a beautiful and harmonious, though highly diversified, combination ! The sun was warm, and with his oblique rays, tinted all nature with the most gorgeous hues. Pity, thought I, that winter should reign here during seven months of every year ! But winter is to the Norwegians the gayest and happiest season of all. I was trying to reconcile this to my ideas of pleasure, when Prakopen came to inform me, in his polyglott language, that the provisions were in progress of consumption ; so I deemed it high time to look after *noget a spece*—"something to eat,"—Reindeer ham and tongues, smoked Bear ham and many other articles were set before us, together with the never failing smoked raw Lax, of which I soon became very fond. The Bear ham would be good if it were not so tough ; this may be equivalent to saying *it would not be bad if it was but good*, but what I mean is that the flavor is very fine, and that if the flesh were that of a Bear Cub, instead of a full grown animal, it would be undeniably excellent. It is eaten like the Reindeer ham, smoked and cured, but otherwise uncooked. Meanwhile, Madame Klerck contrived to get a fire lighted, and busied herself in boiling coffee,

during the preparation of which, the party gathered along the brow of the Sandfaldet, and for want of something to do, began to *speak* of the exploit of running to the bottom. A few bottles of champagne and claret were betted; but while every one was ready to exclaim how easy it would be, no one cared to try, when Madame Klerck, seeing what was going forward, seized hold of Mr. Galt's hand, and ran the whole way down.

The evening passed agreeably, for I managed to shirk my former silent companion, and leaving her to find an escort elsewhere, descended with Mr. Christy, and Captain Thomas, on the opposite side of the Sandfaldet to that by which we had climbed it, and under the escort of Matthias Grüntwyd, a son of Frau Grüntwyd, a particularly amiable, sensible, and interesting boy, we went to the Amptmangaard, near the Elvebachen, a small Quān village, signifying *back of the river*. The Amptmangaard is a house and grounds belonging to the Amptman, who is a kind of Lord High Sheriff. This dignitary does not reside here now, and the dwelling is accordingly shut up. Before it lies a natural lawn, stretching for about a mile down to the Alten fiord, across which it looks to *Storvig* (the big Bay,) on the right it commands a view of *Räfsbottn*, while at the back of the house rises a hill, composed of a triple terrace, which seems to have been originally formed by some receding of the waters, but is now clothed with thick woods.

Räfsbottn, (the Ravens' dell) we learned, is a very grand valley, remarkably picturesque, full of noble views, and stored with abundance of game of all sorts; thither, accordingly, we began planning an excursion, if our time allowed; but the intention (professed by our Captain) of sailing on Monday, defeated these schemes of pleasure.

After visiting the Amptmangaard,—with the natural beauties of which Mr. Christy became so enamoured that he had serious intentions of purchasing this property,—we returned to Bossikop, and passed a place, where a church was building for Kaafiord! a place, distant I should think full fifty miles by land, and about twenty by water. This struck us as very curious, and we asked if, like the Americans, they set houses to travel. The church-builders, who were working with no tools save a very sharp and solid-headed hatchet, which they handled most dexterously, informed us, that after constructing the edifice, and finding that all its parts were correctly fitted together, their plan was then to take it asunder, and forming rafts of it, float it along the Fiords till it reached the spot near the Kaafiord mines, where it was to take up its final stand; when its re-erection would be the work of a very short time. It may be asked why this church was originally built so far from Kaafiord, and the reason assigned to me was, that many carpenters reside at Elvebachen, where large timber trees are also easily procured. This place of worship is intended for the accommodation of the miners, for Mr. Crowe finding that so large and so populous a spot as the site of the Kaafiord works was greatly in need of a nearer church than that of Talvig, which is twelve or fourteen miles distant, exerted himself, and I am happy to say, at last successfully, in obtaining permission from the Swedish Government to build one. Of course, no religion or form of worship save the Lutheran, which alone is tolerated by the Swedish Government, will be permitted. So bigoted are the religious, or rather political scruples of this country, that no Jew is ever allowed to set his foot in the kingdom of Sweden: if only suspected of being a

Hebrew, the individual is examined, and if found to be so, is forthwith banished at the expense of government. Even Englishmen have fallen under such suspicion, and have been subjected to scrutiny, of which I heard some very ludicrous instances.

I may also, now that I am in the mood for giving explanations, elucidate a term which has been used more than once, and that is, *Gaard* pronounced *Gord*; such as *Altengaard*, *Fogedgaard*, *Priestgaard* and *Amptmangaard*. This word has several meanings, according to circumstances; *Altengaard*, signifying the district of *Alten*; while *Amptman*, *Fogedt* or *Priestgaard* are applied to denote the official residences of the clergyman, *Fogedt*, &c. It never means a house alone, but may be used when speaking of a house and offices, or a dwelling with land attached to it.

After returning to *Bossikop*, I was told that the "banes of ane Russ" lay in a hole in some rock not very far off, and being inclined to go resurrectionizing, I engaged to meet my little friend, *Matthias Grüntyt*, the next morning to seek out the place. Then retiring to bed I sought repose, but this was not immediately attainable, for the hospitality of *Madame Klerck* had filled her house so much, that many individuals were obliged to lodge in the same apartment, and some of these not being so tired or so quietly disposed as myself, began to quarrel for beds; the pillows, &c. were used as offensive missiles, and such a bustle arose as "murdered sleep" for several hours.

Friday, August 5th.—More punctual to his appointment than myself, the engaging little *Matthias* presented himself when my coffee was brought in the morning; and we sallied

out to seek for the *banes* of the Russ. After a long search, we found them, lying in a place entirely exposed, the remnants of an open coffin being scattered around ; and it is a very curious circumstance, that through the cranium, and even the inferior maxillary, were perfectly entire, with most of the teeth remaining, yet I could obtain no other bones except small fragments of the Iliac and Sacral bones. Now, it is a well known fact, that the inferior maxillary bone is generally the first to be lost. Even in the Ganges, where so many, otherwise perfect skeletons may be daily seen, that jaw is almost always wanting. The bones were those of a man who had been dead, I was told, for thirty years, but, be it remembered, was never buried ; for he belonged to a sect in Russia, who never cover their dead, thinking that at the last day they would be unable to arise from beneath the superincumbent soil, but simply depositing them in an open coffin, leave the remains to be picked to pieces by the Ravens and bleached in the sun and rain. The orbit of the eyes, and the meatus auditorius were filled with the *Splachnum mnioides*. According to the phrenologists this cranium must have belonged to a sad rascal, for his occipital bone was excessively protuberant, apparently pregnant with mischief ; but Madame Klerck, who knew him when alive, recollected no evil of the deceased. Near this place was a spot quite covered with the delicious *Moltebaer* ; this fruit is often brought to the Norske tables as a dessert, eaten with cream and sugar, and, sometimes, with the addition of the expressed juice of the *Krückebaer* ; its virtues in removing biliary obstructions are well known to the people.

Finding, on my return to Bossikop, that most of our party

had already gone to Kaafjord, Mr. Christy and I immediately started for the same place.

August 6th, Saturday.—It was with great satisfaction that I heard of the additional delay which had taken place in the sailing of the *Harriet*, which was now announced for Wednesday. I therefore employed the day in mineralogizing with Mr. John Crowe, while Mr. Woodfall, the Bergmaster, and our Captain proceeded to Iby, whither we intended to follow them the next day. This evening a sharp frost took place, and I learned that, generally, between the 15th and 25th of August, three or four severe nights may be expected, which cut off the turnep tops, potato leaves, &c. These are called the *Airn-nachts*, (iron-nights) and are regularly looked for; but this year they have commenced unusually early. After this period again, there is little or no bad weather or frost until winter sets in. I ought to have mentioned sooner, that the heat was great during the whole of our stay at Alten, the thermometer averaging 75° in the shade; and this is usual in summer. At Hammerfest, it is not generally so warm, nor the temperature so steady, this place lying farther north than Alten, and being exposed to all the keen north winds that blow from the Polar regions; but even here, when the weather is calm, or the wind southerly, the sun has a most powerful influence, and becomes very scorching.

August 7th, Sunday.—Having to reach Iby this evening, and the distance being considerable, we found it impracticable to delay our departure as we had wished, till six, P. M., and therefore started in the morning; Messrs. Galt and John Crowe, with Captain Thomas, accompanied Mr. Christy and myself to Iby. The first portion of our way was accomplished

in boats, and just as we were passing under the high rocks on the side of the fiord, opposite to the works, the pair of Eagles which I had before noticed rose majestically before us, sweeping round in graceful gyres, as if to animate our spirits by the classical omen. We landed at a spot called Quān Vig or Quān Bay, a rather barren place, with a few houses. Here the mosquitoes presently commenced their wonted attacks, and on hurrying to those dwellings, to procure a light for our pipes (for I had lost all my tinder) by which we might keep these creatures from our faces, we had the vexation to find them uninhabited. In the more marshy spots, this pest became so intolerable that I spent some time and more contrivance in my endeavours to ignite a piece of tow, in which I was finally successful, and after this, we proceeded in comparative comfort.

It astonished me as we went on, mile after mile, through a rich valley thickly wooded with noble Firs, sixty or seventy feet high, and along a chain of beautiful lakes, neither to see a single bird nor to hear so much as a note or chirrup, nor even the sound or sight of any insect, except, indeed, the hateful and incessant buzz and irritating sting of the ever-present mosquito, along with a species of moth, common everywhere in such places as the mosquitoes frequent. Such a complete absence of animal life was quite dismal. We stopped now and then to refresh ourselves, and slake our thirst with handfulls of the *Moltebaer*, and *Krækebaer*, which we found particularly grateful.

A very striking object in these forests is the great number of dead Firs: some of these stand erect, and some are twisted in an extraordinary manner, similar, if one could imagine

such a thing, to a rifle barrel turned inside out. These stems are considered as peculiarly excellent for masts, but one objection to their use is, that after being so employed for some time, they are very apt to twist, and throw the cross-trees out of their proper parallel, and this is a sad eye-sore to a sailor. In passing through the woods I observed several trees, and the stumps of many others, which though dead and decayed, still stood erect, and bore all the appearance of being *ringed*, or rather *undermined*, at about a foot above the ground. On inquiry I was told that these injuries were caused by the horses, which amuse themselves in kicking and biting the dead trees, and thus accelerate their downfall, for they are so decayed as to resemble touch-wood; but though the blame is laid upon the horses, I rather think Bruin has often a “finger or *claw* in the pye;” and if we can imagine, as is probably enough the practice with “ane lit björn,” (a young bear,)—that he now and then forgets his wonted solidity of deportment, and like a cat stretching herself, and sticking her nails into the wainscot, he thus using his claws, may fairly receive a share of the blame upon his broad shoulders; for I did see marks upon those trees which I examined, which could not have been made by a horse, and I think by no other instrument than a bear’s claws. (*See Plate III. fig. 5.*) The trunks of several were perforated with large holes, occasioned, as my guide informed me, by a black and white *Woodpecker*. Others again, and generally the prostrate ones, were drilled by the great *Black Ant*, (*Formica Herculeana*,) from which I received several sharp bites, as I attempted to pop these insects into a bottle of spirits. Here we found four species of *Splachnum*, *S. rubrum*, *S. luteum*, *S. ampullaceum*, and *S.*

vasculosum, all growing together in one heap of horse-droppings.

When we reached Iby, after a walk of nearly three Norske miles, each equivalent to seven English ones, we found that Madame Klerck and Madame Aasberg, with some other ladies, had arrived before us. They had come from Bossikop to meet us; and Madame Klerck had, as usual, made provision for our sharpened appetites. The house at Iby is a very good one, but situated quite alone in the midst of a wood. I soon wandered out with Matthias to the banks of the river Iby, a tributary of the Alten, which it joins at a distance of a few miles from this place. In passing through the wood on my way thither, we saw plenty of *Squirrels* running nimbly up the young trees of Fir and Birch, and leaping from one to another. If by chance these little animals found themselves in a situation whence they could not easily reach another tree, they hastened to the very summit, and on my clapping my hands, shouting, or making any loud noise, they instantly dropped from their lofty position to the very ground, and on my running up expecting to find the creatures killed, and to secure the carcasses, they would dart away unhurt, to repeat the same feat at some adjacent tree. The Norwegian squirrels are brown in summer, and gray in winter; in the latter state the skin is the "petit gris" of commerce, and is much worn by cardinals in Italy. Linnæus, in his Lapland Fauna, calls the animal *Sciurus vulgaris*.

We found the river Iby but a stream, through which I could wade in many parts; its appearance is such as delights the angler, nor does this promise prove deceitful, for it abounds in salmon of large size and excellent quality. It flows, at the

part where I saw it, through a desert of sand and stones, among which grew immense quantities of *Tamarisk* bushes, and a few Willows, which I gathered.

There was nothing here to shoot, except the Squirrels and some Ducks, with a few *Ripa*. Two beautiful Salmon were purchased, weighing about thirty pounds each, for which we paid three *orts*, altogether, two shillings and threepence of English money: they were just taken out of the water, and almost immediately consigned to the pot, and when eaten with the best of all sauce, (hunger always excepted,—though in our case added,) which is the water in which the fish are boiled, they proved most excellent.

Our female friends had set out before us for Bossikop, on foot, a distance of about three Norske miles; they do not mind trifles here, and are admirable pedestrians, as I can aver. Our beds were quickly prepared, consisting only of ill-prepared skins, smelling far from pleasantly, and with a greasy feeling which proved still more disagreeable. Most of them were the skins of Deer, but it was my lot to have one that had graced a sheep's back, and to which still adhered a great quantity of the prickly leaves of Juniper and Crowberry, and nothing was interposed between this couch and the floor; moreover, I had to repose, saving this skin, "*simplex munditiis*," for I was wet even to my shirt with wading, and had to take every thing off to dry. However, as hunger is the most relishing sauce, so is weariness, I believe the best opiate; and after smoking one or two pipes of tobacco to drive away the mosquitoes, I soon fell sound asleep. Our guide, Nicolai, was almost blinded with these insects. Often as I have been mortified by the obstruction which they have proved to my sketching, there is

yet a time when the attacks of the mosquitoes are still more trying to the patience; this is, when after taking the needful precautions for ensuring a night's rest,—fumigating the room well—closing doors and windows—killing every wing of them that can be seen—you lie down dog-tired, and just feel yourself dropping happily and securely asleep, when presently, one vile insect, which had eluded your researches, comes buzz, buzz, buzzing around, and after many airy circles, settles upon your face. You cautiously extricate your hand from the bed-clothes, and with an aim which you flatter yourself to be infallible, smite upon your own countenance. Nothing is heard for a while after the sound of the concussion on your cheek, and you congratulate yourself that the annoyance is exterminated;—but no,—he is not dead,—he returns to the charge, and so matters go on, till either the mosquito is killed after a long chase, or he is permitted to suck his fill and drop off. Imagine then the plague of perhaps a thousand of these insects in a bed-room, where they neither can be destroyed nor caught. The only plan, under such circumstances, is to smoke till you fairly fall asleep, and become insensible to their stings; but the sight of one's own face in the looking-glass next morning, is far from gratifying.

August 8th, Monday.—On rising, a bunch of Juniper was burnt in the room to purify the air after sleeping in it, and when we had taken our breakfast, the party divided to scour the woods in different directions, Mr. Christy, Mr. Woodfall, and myself, going one way, while Dr Greisdale and Captain Moyse took another route. The guide accompanied us, promising to bring us to a good place for *Tioure*, and he carried his *Lure* with him. As this instrument (of music?) is seldom



W. P. H. del.

seen so far north, I was pleased with the opportunity of examining and listening to an article of national interest, of which I had heard and read so much. It is a wooden trumpet, about four feet and three quarters long, formed of two hollow pieces of Birch, neatly and accurately fitted to each other, and then wound over, for the whole of its length, with slips of willow. (*See Plate IV. fig. 1.*) The use to which the Lure is usually applied is that of calling the cattle, or keeping a party together, and for the latter purpose it had been brought in the present instance. As for me, however, I had no fear on that score, for I always carried a pocket-compass, and wherever I went took note of some land-mark that lay in my course, such as a tuft of willows or peculiarly shaped tree, or some rock or stream; by these means I never lost my way when left in a strange place, without a guide. But to return to my subject. Dr. Clarke's representation of the Lure is correct enough; but not so his description of its notes, in which he imagined he found something of music. A beautiful girl is portrayed in the frontispiece to his volume on Norway, &c., blowing on the Lure, the sound of which, he said, was very fine; but it is difficult to imagine anything so harsh, dissonant, and barbarous, as the notes of this instrument, while the act of blowing it, which requires a considerable exertion, puffs out the cheeks like a figure of Boreas, the eyes start from the sockets and become bloodshot, while the whole face and neck assume a deep scarlet hue, all which, as may be supposed, are no improvement to female beauty. Had I heard the noise without knowing whence it proceeded, I should certainly have slipped a bullet into my gun, and gone in search of the wild beast; or taken to my heels, which is just as likely.

I recollect, on one occasion, when shooting alone in the thickest part of the great Alten forest, while I was looking out for *Ripa*, and perchance a *Tioure*, in a place where the brushwood was very dense, and afforded, as I was at that moment thinking, a very probable haunt for Bears, I heard a rustling sound, evidently caused by some bulky creature, which, together with a mysterious kind of snorting, gave me the idea that a bear was close by. Much as I had often wished for an encounter with Bruin, coming thus suddenly and single-handed within a few paces of what I thought was so large and formidable an animal, I must confess startled me terribly; my heart, to use the familiar expression, "jumped into my mouth," and sank again below level, at the recollection that I had only small shot in my gun; however, I slipped a bullet into one of the barrels, and summoning all my courage, went slowly and cautiously forward, with my gun on full cock, when, carefully pushing aside the brushwood, I heard, to my disappointment, and, perhaps, somewhat to my relief, the tinkle of a bell, which at once explained the true nature of the cause of my alarm; this was no other than a mare and its foal, which had strayed much farther than usual, and I am only at a loss to account for my not having heard the bell sooner. These animals are generally belled, like the wedder sheep in England, and the collars to which these appendages hang are frequently very pretty and tastefully decorated; the Cows and Reindeer are also similarly provided, the object being to keep away the Wolves and Bears. (*See Plate IV. fig. 2.*)

When we had been starting from Kaafjord on this excursion, Mr. Crowe told us we had no chance of meeting with any Capercailzie, and it was therefore with the greater

pleasure that I saw a fine cock bird rise, though at a considerable distance. I failed of getting near it, but my hopes were encouraged by the quantity of excrement, some quite fresh, which these birds had dropped under the trees, and just as Mr. Christy stooped to gather a plant, one of these noble creatures sprung from under his very fingers. The guide, however, assured me that at this season of the year, it was hopeless to search for the *Capercaillie*, as they sit so close, that only a good setter-dog could flush them; but in this assertion the guide somewhat exaggerated the real truth; for though certainly very unwilling to take wing, we sometimes put up an old *Tioure*, who, flying to a short distance, generally perches, if not shot first, and keeps an anxious eye on her young, which are running about and trying to conceal themselves under dead and fallen branches or long grass. Sometimes a noble cock bird would rise from off some tree, making a startling noise with its wings as it speeds through the branches and twigs that impede its progress. The flight of these birds is very strong, and they proceed a considerable distance before alighting again,—I, of course, allude to their habits only at this season, for at different periods of the year, they vary. A *Katyögle*, which I shot as he was preening his feathers on a dead Fir tree, made amends for the one which had so provokingly flown away, and I took care to ascertain that he was really defunct before I bagged him. We also saw a *Hare*, but the momentary glimpse did not suffice to convince me that the species is the same as ours. Many hours did we spend in tramping about the woods with very little success. The present season is the very worst in the whole year for birds; a little later or earlier, they are common and easily

procured ; but now, having young ones, they hide themselves. In fact, no one thinks of shooting during this month, though I still believe, from the indications I observed, that there must be many, and that with the help of an active dog, I might have been much more successful than I was. The only birds which occurred in any great plenty, were *Magpies*, *Ravens*, and *Hooded Crows*; the first are protected by superstition, which makes it unlucky to kill them, while I could seldom manage to approach a *Raven* near enough to shoot it.

We returned to Iby after a tramp of three Norske miles, during which we had not obtained much, not even any Willows that we did not already possess. Glad were we to rest our fagged bones awhile, and *roeke ane pipe tabak*, to keep off the mosquitoes. The remains of our yesterday's salmon were attacked, and before we had half finished, Dr. Greisdale and Captain Moyse came to the rescue of their share of the fish, which we the more readily gave up, as they had brought some game. We then set off for Bossikop, through a very fine country, where I managed to fill my game-bag. We passed a place where Tar had been made for home consumption; it resembled a lime-kiln; the wood is rammed in at the top, and being set on fire is not allowed to break out into flame, but kept *smouldering*, when by this progress of destructive distillation the tar flows out through a spout below.

It often struck me, while passing through those tracts of country, that they must bear some resemblance to the "dismal Pine Swamps" of North America; an idea in which I was subsequently confirmed by a person who was well acquainted with the latter country, and who observed, on seeing some of

my sketches, that the points of similarity were very remarkable. Wary walking was needful here : often were we on the point of sticking fast in deep holes of vegetable mud, insidiously covered with the limbs and branches of Firs, while numerous stumps of the same kind of tree, overgrown with moss, often proved too rotten to sustain our weight, and down we went, the mud squirting about on each side of us. The curved toes of my *Komagers* several times threw me headlong into some slough, by catching hold of crooked and tough roots.

I ought to have sooner described these *Komagers*, an article of dress much used here, indeed, invariably by the natives, and found so comfortable and convenient by strangers, that they frequently adopt them also. There are two kinds, of *Komagers*,—*Winter* and *Summer Komager boots and shoes* ; the former,—winter *Komagers*, are called *Skall-Komagers* ; these are *shoes*, made of deer-skin at a season when the hair is short, close and stiff, leggins of the same material being worn with them. The *Summer Komagers* may be either boots or shoes. I always used the former, reaching above my knees,—formed of leather ; there are no soles nor heels to either kind ; I do not mean to say that the foot is exposed below, but that the upper and lower parts are of the same thickness throughout, and indeed formed in one piece. They are much too large to admit of the foot only, but it is customary to stuff them with *Sena grass* (*Carex sylvatica*,) which being rubbed soft in the hand, is laid in equally and neatly in all parts. The *Komager-band* fastens them round the ankle, and no stocking is worn. It is customary to grease the outsides of the *Komagers*, to render them impervious to the wet. The

curve at the point is adapted for catching into the strap of the *Skie*,* or snow-skait, which I now proceed to describe. These are flat pieces of Birch-wood, nine feet eight inches long, (such at least is the measurement of a pair which I possess, and I saw many even longer,) by about four inches broad; remarkably thin and light, turned up at both ends, especially in the front. Some are soled with seals' skin, or the skin of the deer's leg, to prevent their slipping back when ascending a hill side. The guiding pole is about six feet long, with a small wheel within four inches of the point, which when stuck into the snow enables the skaiter to turn, regulating the too rapid progress, guiding to one side or another, or serving as a weapon, for which purpose it is often shod with an iron spike. It is astonishing how these people avoid dashing against stumps of trees when rushing along with the speed which these *Skies* afford. The rate, however, at which they can go, has been much exaggerated, and the drawing in De Capell Brooke's work, representing the *Skjelöboere* descending a steep hill-side, is certainly a stretch of fancy; such a feat being, I was often assured, quite impracticable, an angle of ten or twelve degrees being the utmost that could with any safety be attempted, for a slope greater than this would give the *Skiedör* (Skaiter) such an immense velocity of descent that he would almost immediately lose all power of guiding himself out of the way of dangers.

If a *Gamme* (Norwegian hut) or any rounded obstruction lies in his way, and is covered with snow, the *Skiedör* speeds his course over it, and instead of descending immediately on

* The *k* in this word is pronounced like our *h*.

the other side, the impetus shoots him several yards off, before alighting again. There is a *Gamme* at Kaafiord, situated on a gentle slope of a hill, over which it is a favourite amusement of the *Skiedörs* to dart. (See Plate IV. fig. 4.)

August 9th, Tuesday.—Messrs. Christy, Walker, Galt, and myself,—the rest of the party having gone to Kaafiord, —proceeded to-day to climb some of the mountains, taking with us the postmaster as a sort of guide, and a boy, by name Cornelius, to carry our provender.

The scenery through which we passed, was of a highly varied character, level and fertile, precipitous and rocky, deep woods and extensive marshes, the latter filled with tussocks of *Moltebaer*. I observed a *Snipe*, the flight of which was unlike that of ours, but the distance was too great to enable me to ascertain the species. Near the summit of the mountain, two Eagles sat perched on a rock, screaming most vociferously; on seeing us they rose and whirled around, changing their cry into a short shrieking bark, but they took care to keep a respectful distance.

The dog which I had taken with me killed three *Lemmings* (*Mus Lemming*,) the *Lemond* of the Norwegians; but he quite destroyed their pretty striped black and brown skins. These animals are by no means scarce here, and what is related respecting the propensity of the Reindeer to eat them, I consider to be highly probable from what I saw of the latter creature's habits. The Postmaster, and several other individuals, assured me that they had seen the sheep eat Lemmings, and that after so doing they always grew poor and shortly died, so that as soon as a sheep was observed to do this it was immediately killed before it should become worth-

less. The Deer will often strike the Lemmings with their fore-feet, and bite them, but no person with whom I conversed upon that point could positively assert to his having seen the Deer actually masticate and swallow these creatures. The Lemmings appear to live chiefly in marshy spots, in high grounds, especially where the *Moltebaer* abounds, as I observed them repeatedly diving into holes under the tufts of this plant; and their favourite resorts are always high on the hills, thus accounting for the expression which the Norwegians used when telling me that "the Lemmings come down upon them in great bands."

We gathered large quantities of the *Craneberry*, (*Vaccinium Oxycoccus*), *Myrbaer* of the natives, the fruit of last year being still quite good, preserved by the snow, whilst that of the present season was fully ripe. The "*Vaccinium Myrtillus*" (*Blaebaer*) and "*V. uliginosum*" (*Odon*), with the "*V. vitis idaea*" (*Lingon*) and *Krækebaer* grew in great profusion, their berries having been covered by the snow.

I soon quitted my botanizing and entomologizing friends, and went in search of the picturesque, which I shortly found in such perfection as quite to baffle my poor attempts to depict it. One spot was eminently grand; it was a deep ravine or gulley, at the bottom of which ran a stream; this rent in the rock came to an abrupt termination, and the water shot beyond it in a beautiful fall. After walking along the side for about half a mile, I reached a spot, where, after some little trouble, I made my way to the bottom, and saw two perpendicular precipices of Greenstone rock rising abruptly on each side of me to a height of at least fifty feet, increasing as I descended, till the elevation might be full seventy feet, and in

some places almost closing over my head. The bottom was entirely filled with *Angelica Archangelica*, a plant of which, by this time, I had grown as fond as the Norwegians; so, selecting the tenderest shoots of this delicious vegetable, called here *Myrstut*, I sat down to sketch, and kept munching all the while, and then crammed my game-bag with a stock of it to take home to my friends.

The people of this country are well aware of the valuable stomachic properties which reside in the warm aromatic stem of the *Archangelica*, and eagerly gather it wherever they can find it. Those who have only tasted it in the candied state, cannot have any more idea of its delightfully pungent and aromatic flavour than as if they ate a cabbage stalk, nor of the impulse it gives to digestion by accelerating the peristaltic motion.

The *Cetraria Islandica* (Iceland Moss,) grows plentifully here, and is used by the people, boiled to a jelly, for the cure of consumption, which complaint is, however, not by any means common.

A Doctor is so rare and important a personage in this “divisa dal mondo, ultima Thule,” that the poor people are glad to make use of any herbs and simples which they deem efficacious in removing their maladies; and it can excite no surprise to observe that in the extraordinary and indiscriminate catalogue of their *Materia Medica*, many substances find a place which are not only wholly inert, but often eminently deleterious in the case of the particular disease for which they are prescribed. Few, however, comparatively speaking, “are the ills to which” *Norwegian* “flesh is heir.” For almost all of these, not even excepting the acute inflammatory attacks,

Camphor mixed with *Corn brandy* is an approved specific ; and of the former remedy they will sometimes eat a lump as big as one's thumb. *Assafœtida*, again, they hold in high admiration, and the same is the case with every drug which possesses a rank flavour and disgusting smell.

Common as the Itch is in Iceland, and is said to be here, I never saw a case of it among the Norwegians, who are affected, however, with a nearly allied disease, a kind of Leprosy ; but unfortunately the late Doctor at the Kaafiord works is so destitute of curiosity, that all my endeavours to extract from him any information respecting the national diseases were completely baffled. For the two or three last years an epidemic, perhaps contagious, gastric fever, has raged at Kaafiord, where it has carried off a large number of the miners, and two successive English doctors. In the excellent hospital built by Mr. Crowe for the accommodation of the sick people belonging to the works, there was not a single patient during my stay.

In submitting to operations the people are particularly courageous, and cannot bear to be thought cowards. I once saw a Lapland woman, who, on having an incision made in her hand to extract a needle, fearful lest any cry should escape her, crammed her mouth with her shawl.

On returning to Bossikop we passed by a Laplander's Gamme, on the roof of which lay some lazy and surly-looking dogs ; these animals in their physiognomy much resemble the shepherd's Collie in Scotland, but the hair is long and very black. Madame Klerck had a very good one, and I have since regretted that it never occurred to me to make a sketch of him ; he was a very attached animal, and by no means

deficient in courage, though his age was considerable. Most of these dogs, however, are not complaisant to strangers, but as the owner of one said, they are “meiget cliver,” (very sagacious.)

When we reached home, Madame Klerck treated us to a very favourite Norske dish; this consisted of stewed Reindeers' tongues, sliced, and sauced with a great deal of butter, sugar, and preserved cherries, with spice! We could not relish it. The natives are particularly fond of sugar, the liberal addition of which spoils their best dishes, as well as their teeth, so that a perfectly good set is comparatively rare, and I have seen the faces of some of the prettiest young ladies rendered quite unpleasant by a range of black and broken stumps. Instead of butter, cream and sugar mixed together are used for fish sauce, and into many such heresies in the art of cookery does their inordinate fondness for sugar lead the Norwegians. Stewed meats are most in vogue. I must do the people, however, the justice to say, that the utmost nicety of cleanliness is observed in all their culinary operations, which steam-packet cooks would do well to copy. Nor do I ever recollect having failed in making most hearty meals.

And now that I am on the subject of eatables, I may speak of the *Gammel Oust*, literally “Old Cheese,” which is prepared in a peculiar manner, and much prized for its piquant flavour, which considerably resembles very high and ripe Stilton. Another kind of cheese is made, very hard, *with sugar*—a peculiarly disagreeable and incongruous compound; and still another is the *Reindeer milk cheese*, which is like a most ordinary Scotch Dunlop cheese, tough as leather and sour withal; its chief use, I should think, is to afford a large quan-

tity of oily matter, which is a very efficacious external application in cases of frost-bites, for, indeed, I hardly know who could eat it, its smell is so very rank, and the very sight of it would make one think of indigestion and nightmare. This is not, however, a Norske, but a Lapland edible, or rather *inedible*.

August 10th, Wednesday.—This morning every one went whither he listed, and no two of us took the same course. A couple of patients applied to me for advice, one who, for sore eyes, had used *Hoffman's Drops*, a favourite kind of universal medicine; and another was afflicted with Rheumatism. The Lapp remedy for the latter complaint is a *moxa* of *Boletus igniarius*, called *Toule*, together with a dose of Corn-brandy, pepper, and gunpowder, taken internally.

After visiting these patients I bent my steps to the Alten river, and, mindful of the disaster that had there befallen me, approached as closely as prudence would allow to the unlucky spot, where I sat down, and endeavoured, by making a new sketch of its brilliant scenery, to repair my former loss. Thence to Kobberstadt, of which I took a view, as well as of a cleared piece of ground in the wood, where a house was built, in drawing which I reclined on a carpet of *Rubus arcticus*, whose lovely flowers covered all the ground. Lastly, my poor pencil was taxed to represent the beautiful valley at the Sandfalls, (mentioned in my note for Thursday, August 3rd,) but the more I saw of this exquisite spot, the more did I find both pen in description, and pencil in delineation, fail of conveying any idea of its perfections. Here I discovered a fine echo, which I pleased myself by hearing repeat after me, quite distinctly, my three names, and as it greatly mellowed

and sweetened each sound, I sat and sketched, singing and shouting the while without fear of interrupting or being interrupted. I hardly ever enjoyed myself more, every thing was so beautiful, but I could not help feeling humbled too, when I looked at the miserable, weak, and dingy sketch, and then gazed again on the grand features and lovely hues of the incomparable original. It was not till the sun began to redden every object with his gorgeous setting tints that I thought of returning home, so long did I linger on this delightful spot.

On rejoining my companions, I was told that a Finnish *Bastuen* or Vapour bath was not far off, and as we were all desirous of visiting one, we sent orders that it should be heated expressly for ourselves, and taking a little Flibbertygibbet of a boy for our guide, we made our way thither without any delay. The path led through some beautiful scenery, and while matters were preparing within, I made a sketch of the exterior. The boy conducted us into the house of the proprietor of the bath, where some *Filbunke* was set before us. In this fine dry climate, I have no doubt that this food, which is sour clotted cream, eaten by people of a robust constitution and hard-working habits, may be very wholesome, and with the addition of a little sugar sifted over it, as it is usually taken, I found it by no means unpalatable. In the present instance the saccharine accompaniment was wanting, and nothing could be droller than to observe the keen attention and sly countenance with which our roguish guide scrutinized the strangers, and watched who did and who did not like the *Filbunke*. The wry faces, made by some of us, elicited from him loud shouts and screams of laughter. The pans out of which it is eaten, resemble the inverted bottoms of tubs, being

about four or five inches deep, sixteen in breadth at the bottom, and thirteen or fourteen at the top. It is conveyed to the mouth with short wooden spoons. (*See Plate IV. Fig. 3.*) The lad himself being hungry, sat down to a banquet of rye-cake and raw salmon! Whether the little fellow thought this food was too good to be offered to us, or whether he judged that if we made grimaces at F'ilbunke, we should turn quite sick with uncooked fish, I cannot tell: at all events he professed us none. So I made my modest request for a *small* bit, and when that was despatched, I asked for more, and cut myself a bolder slice, and certainly did not find it bad eating.

I am inclined to think that if raw salmon were put into a person's mouth with his eyes shut, he would pass no unfavourable opinion upon it, and by custom it might by some be preferred to cooked fish, as is the case here. No other of the party, however, could be induced to overcome their innate disgust at eating what was raw, and freshly taken out of the river; but though I own, that to my taste, the boiled salmon is still preferable, I can easily imagine that habit would soon reconcile me to the other. The rye-cake was good, and somewhat similar to a very well made Scottish potato bannock, and rather sweeter. Of the Norwegian *Missen bröd*, (bread of misery or famine,) of which one hears so much, I saw nothing except a specimen preserved as a curiosity; and I am happy to find that the frequency of communication now existing between Russia and these remote and Arctic parts of Norway, precludes the danger of that dreadful scarcity of better aliment which alone could compel the starving population to have recourse to such a wretched substitute for the "staff of life." Linnæus must have been fearfully hungry

to have said of Missen bröd, "*Panis hic albus est, dulcis et gratissimus, præsertim recens.*"—(Vid. Fl. Lapp. p. 250.)

By this time the bath was ready, and Mr. Galt, without hesitation, (for he had been in Norway before, and knew the manners and customs of the people perfectly, and generally acted as our interpreter,) stripped himself, though there were women in the room, who took it quite unconcernedly, as a matter of course. When he returned, he had to sit in the same condition until a triple perspiration had come out, and still the females kept their places and their countenances; the same was the case when Mr. Walker's turn arrived. Now, as this bath only admitted one person at a time, and was beginning to get cool, at least cooler than was considered right, it had to be reheated, and orders were given to make it hotter than on the two former occasions, so I expected to be almost stewed alive. In the interval I made a sketch of the interior of the room, when in came a young female, and seated herself. I began to hope she would soon take herself off, when the old lady who had charge of the bath sent to inform me that it was waiting, so, doing as others had done, I undressed, and seizing Mr. Christy's little dog, Prenez, in my arms, scampered with him to the bath, being curious to see what effect the heat would have upon the animal. As soon as I entered I verily thought that suffocation was inevitable, and I sunk down upon the earthen floor, when instantly a copious perspiration burst from every pore, and trickled down in large drops. The entrance of the old woman made me start off, and jump up a kind of ladder to a shelf or platform, covered with birch twigs, where I lay down, coughing violently from the effects of the smoke, which almost blinded me; then the good lady took a branch of birch, with the

leaves on, and dipping it in hot water, handed it to me that I might flog myself withal, which I did till I was tired, the heat meanwhile being so painfully intense as almost to bring blisters on my skin, the thermometer standing about 140° ; however, I flagellated myself till I was as red as a boiled lobster, the woman all the time pouring water on the charcoal embers, and creating a dreadful steam and heat. After remaining in this elevated situation about fifteen or eighteen minutes, I was called down, and got into a narrow tub of warm water, in which I stood up to my knees, in imminent danger of capsizing it, while my antiquated attendant washed me all over, poking her fingers into my eyes and ears more particularly. Glad was I when she told me she had done, for the vapour of charcoal was quite painful to my eyes, and made them, though fast closed, water very copiously. Back, then, I scudded to the house, where I sat for some time in a profuse perspiration; it was, indeed, idle to think of putting on any article of clothing while in such a state, for half a minute would have rendered it as wet as if dipped in the river.

But enough upon this subject.—Drunkenness is a very common vice, though not so prevalent among the Quāns as the Norwegians, and more especially the Laplanders. When the latter, who are very much addicted to liquor, get *pisk* (tipsy,) they hardly ever fight; but if they do, nothing can be more ludicrous than to witness their faces, swollen out with rage;—they bite their lips,—frown hideously, and strutting up to each other with a diabolical scowl, only look most laughably mock-heroic. Presently they rush together, clasping one another in their arms, while they deal most innocently furious cuffs upon their enemies' thickly clothed and invulnerable

backs. I once witnessed a scene of this kind, and thought I must have expired with laughter; the more so, as the Lapp spectators stood almost petrified with horror at the affray.

Though these people all carry knives, I never saw or heard of one being drawn, either in anger or self-defence, against a human creature. Generally speaking, their drunken fits give them a peculiarly sociable and friendly turn of mind. On Saturdays or Sunday evenings, after six, I have noticed them sitting in knots of five or six men and women, hugging and kissing each other, as fuddled as fiddlers, with the Corn brandy or Rum bottle ever and anon circulating between these bursts of affection.

But to return to where I left off: Mr. Christy found the heat of the steam bath so uncongenial to his taste, that he had to call out "*ikke mere,*" (hold, enough,) to his tormentor, and then ran out and hurried back to the house, vowing he would never enter such a place again. For my own part, though I took in the dog by way of experiment, I was too much occupied with my own feelings to pay any attention to his, nor did I notice him till I saw him running after us as we returned to Bossikop, where, after partaking of a rather late supper, with a voracious appetite, I went to bed to sleep more soundly than I ever did before.

August 11th, Thursday.—This morning was occupied in finishing sketches, skinning birds which I had shot, and packing up willows and live plants.

In the afternoon I went to take a view of Bossikop, which I wished to present to my hospitable hostess, Madame Klerck, from whom we were immediately to part, and when I came back, I found that I had been sent for to visit a patient. The

sick lady was a friend of Madame Klerck's, who immediately offered to accompany me, so off we trudged together. The walk was indeed a beautiful one; we crossed the Alten river and reached the dwelling of the invalide, who had just been confined, and was trying to cure herself by Hoffman's Drops. Our return was by a different way from what we came by, and led us near the spot where some days previously I had found the *Karl's-skefter*; after considerable searching I got abundance of this stately plant, but the flowers were all cut and blackened by the frosts of the recent *Airn-nachts*. Here, too, were many fine Willows, which we stowed in some travelling baskets that we had purchased.

After supper we all proceeded to Mr. Vendal's store, to look over his curiosities, and buy some little matters; among them was a beautiful box of Birch-bark, very neat, and rendered capable of holding water by being formed of the entire circumference of the tree's bark. Also a pretty butter-tub, which shut by an ingenious contrivance of great simplicity,—on the middle of the lid is fixed a pin, on which revolves a bar that slips into two ears on the sides of the box. (*See Plate IV. Fig. 3.*)

August 12th, Friday.—This morning we went to obtain a boat and boatmen, which being engaged, we took leave of our kind hostess, who had entertained us so hospitably, and whom I felt no small regret at leaving. She gave each of us a small sprig of *Forget-me-not*, which I shall ever preserve as a memento of some of the happiest hours in my life. Some little attentions which I had paid her, when she was unwell, had made a strong impression on her grateful heart, and she was urgent in her entreaties that we would come back another

year. Finally, she took leave of us with the kindly wish, (doomed, however, like many such in this world, not to be realized,) "*lyk paa Reise*," (a pleasant, or prosperous journey.)

On arriving at Kaafjord, we were officially informed that the *Harriet* would sail on the morrow; but private intelligence assured us she could not be ready for sea before Tuesday! And now how did we regret these delays, and our too ready belief of the Captain's first statements! Had we known this before, we might have seen Råfsbottn, Storvig,—have easily visited the North Cape, and have taken far more distant excursions into the interior. But it availed nothing to lament the Captain's indecision, and our own credulity: so wishing to make the most of the time that yet remained, I bethought me that many objects in the immediate neighbourhood were well worthy of being sketched, and according to an axiom which my friends at home have tried hard to drill into me, that "a work begun is half finished," I started off to take a view of the Kaafjord works and surrounding country. Accompanied by Mr. Crowe, to whom this subject was of course peculiarly interesting, I sought out, with a telescope, a spot upon the other side of the Fiord, whence this more experienced person assured me that the best general *coup d' œil* could be obtained, and having managed to scull myself across in a boat, I climbed a pinnacle of rock, and presently commenced operations—and so did the mosquitoes. Accuracy, I thought, was the first point in a panoramic representation; so, fearing that the distance which lay between, might cause me to commit blunders, I examined every object with the telescope before putting it down with my pencil, and this, though a tedious process, during which the mosquitoes were peculiarly annoying, I found the very best plan that I could have adopted.

August 13th, Saturday.—The whole morning was devoted to completing my drawing. After dinner, at which we had been promised the banquet of a stewed *Colt*, that special delicacy of this country, (but whereof we were baulked by our Captain, who, between a dislike to eating what he called *Carrion*, and the temptation of making a good bargain, purchased off the animal for three dollars,) I went to witness an execution of justice. The culprit was a Norske-man, who had, while *pisk*, attempted to purloin three shirts from the store. Being detected, he was sentenced to receive twenty lashes, which were accordingly given with the rope's-end, and in the tenderest manner possible, so that if the offender's feelings were not more hurt than his flesh, I fear there was little good done. Mr. Aasberg indignantly remarked, "an English sailor would stand that whipping for a single glass of grog;" adding, as he shook the stout flexible tube of his pipe, with which he has been seen to execute summary justice on occasions,—“it is a shame!” We supped with Mr. Aasberg, whose hospitable house was indeed always open to us, and at whose table we often enjoyed ourselves in the evenings. His only son was an invalide, in whom I was much interested.

August 14th, Sunday.—Accompanied by our friend Captain Thomas, Mr. Christy and I went in a large boat to Talvig, with several other persons. Besides seeing the place, we were to stand god-fathers to a child, and Madame Lening, whom Brooke speaks of as his “fair companion,” and who with her husband accompanied him in one of his excursions, was to be the god-mother. As it was Sunday I left my gun and sketch-book behind. Talvig, as I think to have before mentioned, is the nearest church to Kaafiord. We went

first to the house of Mr. Norberg, the merchant, and thence to church.

The edifice is built in a style very similar to that of Hammerfest, but is larger and handsomer ; service was going on when we entered, and though of course we did not understand it, still we could catch here and there a few words or perhaps sentences. The minister, arrayed in a black gown and stiff frill, stood before the altar, on which was placed a representation of the crucifixion between two large candlesticks, containing huge gilded wax candles, I cannot call them *tapers*, for they were much thicker than my arm, and he sang or spoke the service, in which he was sometimes joined by the choristers, and sometimes dolefully chanted it alone with a most lugubrious voice. After a good deal of this, there was an interval, the clergyman and congregation went out, and immediately the bells struck up a most unpleasant chime, which my little friend, Matthias Grüntwyd, who had joined our party, gave me to understand was intended to give joyous signification of three weddings about to be solemnized, and *eight* children to be baptized. It would seem that these hyperborean latitudes, though the contrary has been affirmed, are very conducive to philoprogenitiveness, and if they continue so, I fear the Northmen will, ere long, become too numerous for their own country to hold them, and again overrun the more fertile lands of their southern neighbours.

Meanwhile I wandered about the neatly kept burying-ground, which was very full of tombs ; Matthias pointing out to me those of several families in the neighbourhood, several of which were strewed with flowers wound into wreaths or tied in bunches. Many plants were cultivated upon the graves,

chiefly the *Forget-me-not*; the latter grew very abundantly in Madame Klerck's burying-ground, where her husband lay, and as I stooped over the rails to gather one of them, I accidentally pulled a specimen which had two heads of flowers upon the same stalk, one of them fresh and blooming, the other nipped and withered. While I stood with the plant in my hand, thinking of this coincidence, the bells stopped, and Matthias gave me a hint to come into the church.

The women took one side of the building and the men the other, each party occupying a separate pew. Here I witnessed a scene which, according to our English notions, was somewhat scandalous, the wedding of a couple, having four grown up children, who came to see papa and mamma married.

Another woman presented herself to be joined in like manner, who was of such notorious character as to be commonly called by a name which I do not choose to repeat. If I remember rightly, these persons were Quāns; but even without these two specimens, we must, unfortunately, admit that the morals of these people are by no means to be held up as a pattern. A sermon began this service, its subject taken from the service of the day, (the Scripture Lessons are the same as ours,) the text being our Lord's parable of the pharisee and publican. The name by which the latter was designated, struck me as doubtless conveying the meaning of the original more correctly than ours; *Tolder* was the word, signifying *collector of taxes or tolls*. After the sermon came more chanting and singing, while, as in Scotland, the poor's bag was handed round for donations; then the marriages were solemnized, and the children baptized. No interchange or giving of rings took place in the

former ceremony. The infants were swathed in cases, like little mummies, and the most expert surgeon might admire the neat way in which the Norske nurses rolled up their children and encased them from head to foot in a regular roller bandage, the head only being protruded, which swings from side to side as it would drop off. No wonder the poor things squalled so vociferously! After seeing my godson baptized, and one of my names appended to his, I departed, leaving Matthias, who remained to be confirmed by the minister, and went to Mr. Norberg's house, where dinner was preparing. At Talvig was the only stone building that had struck my notice, since arriving in Norway, and it was a distillery. So, thinking this would be a favourable opportunity for procuring corn-brandy really genuine, I spoke to Mr. Norberg, who got the best for me, both with and without the flavour of carraway-seed; I also purchased a pair of Komager-bands and of beautifully white fur mittens. Mr. Christy bought an ancient Norwegian belt for the waist, formed of a series of gilt plates, rudely stamped and attached to a strip of leather. It is an object of great curiosity and considerable intrinsic value, bearing some similarity, though very far inferior in workmanship and taste, to an Icelandic one, which my father brought home thirty years ago. Here I saw, for the first time in Norway, rabbits, pigs, and tame ducks.

The minister dined at Mr. Norberg's house: he was a very well informed and intelligent man, and as he sat by me, I endeavoured to glean from him all the information I could, which he readily and fluently communicated in French, having apparently read much on various subjects. That of Phrenology amused him highly, and he argued with much

acuteness upon this science with our Captain, who advocates it warmly to the greatest lengths.

In the afternoon I went on board a Danish vessel to visit some of the crew, who were sick, and found that the Captain was acquainted with the Jorgensen family in Copenhagen, the name of one of whom, Jorgen Jorgensen, must be familiar to those who know anything of Icelandic history. The son of an eminent watchmaker in Copenhagen, he became a sailor under the Danish flag; then prisoner of war to England, where he broke his parole, and went in a merchant vessel to Iceland, usurping the government of it from the Danes, and constituting himself "His Excellency, the Lord High Admiral both by sea and land of the island of Iceland!" He again surrendered as a prisoner of war to the British flag; quitting his dominions at the same time that my father left Iceland: saved the lives of my father and the crew of the vessel in which he sailed home, from destruction by fire; committed crimes in England which twice condemned him to the gallows, and finally banished him for life. Such is the outline of the career of the man now alluded to, and with whom this Danish captain had sailed. Upon my informing him that Jorgen Jorgensen was alive and well in New South Wales, he said that his brother, now chronometer-maker to the king of Denmark, would be very sorry to hear it.

As it was now time for us to return to Kaafjord, and the evening was very rainy, I wrapped myself up in my *paesk*, and drawing on my newly acquired mittens, made of white deer's skin, very pretty and soft, I bade defiance to wind and rain. The row homeward carried us near the shore, so as to avoid adverse winds. Close beside us rose a very high and

entirely perpendicular cliff, thickly clothed^d on the summit with Birch trees, and composed of alternate strata of limestone and clay-slate, with a slight dip towards the west. If I remember correctly, there were four layers of each, giving the face of the rock a peculiar and grotesque appearance, as if it had been painted dark gray and cream colour in stripes. This formation ceased when we reached *Hoskin-ness*, a point or peninsula, so called from its resemblance to a Boatscoop turned bottom upwards; the *Norske* name signifying Boatscoop Point. This beautiful Point exhibits, in a very marked degree, a feature which is prevalent here, viz., the appearance of terraces, formed by the subsiding of the waters, seemingly at some very remote period. Soon after passing this, we reached Kaafjord; but, late as the hour was, our godson's father insisted on our going to his house, that we might partake of a supper that had been prepared for us. All sorts of good things were set out, and to these our long aquatic excursion inclined us to do ample justice. Ptarmigan, killed last Christmas, and kept for use by being laid in salt, Reindeer meat, various preparations of cream and excellent wine graced the board. While regaling ourselves on these dainties, Mr. John Crowe came in with a budget of news, the principal article of which was, that the *Harriet* would not sail till Tuesday. So, wishing health, happiness, and long life to my little godson, we departed, leaving the merry party to enjoy themselves.

August 15th and 16th, Monday and Tuesday.—My time was now filled up in finishing sketches, for I could not go to any distance from Mr. Crowe's house, the summons to sail being daily and hourly expected.

August 17th, Wednesday.—Another delay in the sailing of the *Harriet*: some reindeer, a cow, and several sheep were to be taken on board, together with the requisite provision for those creatures.

Mr. Walker, we found to our great regret, had determined to go home overland by Torneö. Nor was it Mr. Crowe's intention, nor that of any of the friends who came out with us, to return in the *Harriet* with Mr. Christy and myself. Taking leave now occupied no small portion of my time, and my last call was on the little son of Mr. Aasberg, in whom I felt a deep interest, both because his parents' affections were centered on this their only child, and because of the extreme kindness which those parents had shown to me, and which now at parting was expressed in the liveliest terms of gratitude for my attention to their little boy.

August 18th, Thursday.—Off for England! After many delays we got on board at six, P.M., many of our friends accompanying us as far as Hoskin-ness; when, after many a "*Lyk paa Reise*" on their parts, and many thanks and adieus on ours, we were soon carried by a favourable wind, out of sight of the hospitable shores of Norway.

Greater kindness no strangers could receive anywhere than we had met with in Norway, and, as long as I live, it will always be a pleasure to me to look back on the few, but happy days, which I have spent there.

Though my little Tour may be said to have ended when I left the country, still many circumstances occurred to me before reaching Glasgow; much water was yet to be crossed, and far different from my passage out was my voyage home. From the day we quitted Norway, all sorts of disasters began

to fall upon us. In the first place, I may mention that our vessel, which was about 230 tons burthen, carried home full thirty tons more of copper ore than she ought to have done; her deck was not more than a foot and a half above the actual water-line at the waist, and of all cargoes this ore is the most unmanageable; it lies in a heap, amidships, straining every timber, and causing the vessel to labour violently.

From the day after our departure we had the severest storms, driving us right off our course, and causing the vessel to make a great deal of water; and this weather continued, without intermission, to the 1st of September, when we reached Shetland.

The first circumstance which disturbed the equanimity of my temper, and really gave me vexation, was, when upon the leaking of the bull's-eye of my berth, I changed my cot for another, which I hoped would prove drier, and had snugly ensconced myself in it on the leeseide, we shipped a heavy sea over the windward bows, which, rushing aft, shattered the cabin skylight, and sent a whole cataract of salt water down below. Mixed with this flood, came the Duke of Bedford's willows, which had been packed in air-tight cases, made on Mr. Ward's excellent principle, together with the contents of two Norske baskets full of the same trees, their roots set into a mixture of *Sphagnum* and earth; dirt and mould from Mr. Christy's boxes of living plants, which, to be out of the reach of spray, we had sagely stowed aloft; broken glass and pieces of rubbish, all rushed into the cabin and landed on my bed. I started up and prepared to flee, when a second irruption compelled me to succumb; so, dripping wet, I crawled into the state cabin, where Mr. Christy slept, and having dried myself as well as I could, I got into his bed.

The next morning it was disheartening, indeed, to see the damage that had been done. As the vessel rolled from side to side I heard minerals rattling on the cabin floor, which was covered with water; a considerable number of my sketches were reduced to the state of so much dirty rotten paper; skins of animals—my Snowy Owl, (*Stor-yogle*,)—Squirrels' skins—Reindeer skins—my Paesks—book of notes, and my guns in their cases, were floating about. The Duke of Bedford's willows were, to my great vexation, as I before said, all ruined; and two carriers' baskets, (see p. 57,) filled with growing plants, which we had lashed up to the crosstrees, to be, as we innocently thought, out of danger, carried off bodily! On deck the destruction was even greater than below; the boats were stove, and the galley knocked to pieces; and two of the Reindeer which we were taking with us to England, died. Some of my articles I could not get at, but all that I did see was not certainly in a state to afford me hope concerning the rest. I could not dress myself, my garments were all soaked, and the storm was too violent to allow of any fire being lighted to dry them, except a small one, which smoked so as almost to suffocate us, and would hardly boil a pint of water, besides being every now and then entirely quenched by the salt water rushing down the orifice of the funnel, which was now levelled with the deck. True, indeed, is the remark which I have seen somewhere, that "those who would not starve at sea, must eat with their eyes shut." The destruction of the galley reduced us to very bad fare; often we had neither breakfast, dinner, nor supper; and such filthy food as was set before us I had never beheld before,—all was filled with reindeers' hairs from the skins on board, which had got into the

water-butts, and, indeed, into every thing else. Our meals, when we could get any, consisted of very salt bacon, a few bad potatoes, mouldy crumbs of biscuit, and a little rancid butter.

The *Aurora Borealis* used sometimes to blaze through the black clouds of these stormy nights with great splendour; it failed, however, to dissipate the gloom and “winter of our discontent,” this phenomenon not being ominous of better weather. In Norway I had often enquired whether it was ever *heard*; some said one thing, and some said another; but the most rational statement in reply was,—that *if* any sound *did* accompany the Northern Lights, it was probably attributable to the *rising wind*, of which this phenomenon is commonly a precursor, and that the noise much resembles that of a rushing gale. Even this may perhaps be but imaginary; in the stillest weather, if a person stands attentively to listen, nothing is easier than to think one can perceive a rushing or rustling sound.

Three or four of our crew were laid up with over-work, bad fare, and wet beds; nothing was dry in the whole ship. Two more of the Reindeer died. It had been curious to watch the habits of these creatures; their fondness for salt is quite remarkable; on shore they will follow for a long way any person who only shows them some; they also lick up urine greedily; and it certainly seems, as the Laplanders always say, that the Reindeer, if not permitted to drink of the sea water every summer, will die. In the present instance, however, the poor animals got too much of it.

At last we made the Shetland Isles, and intended running into Lerwick; but, meeting a fishing-boat, it piloted us into

Balta Sund, in North Unst. I was vastly delighted when I heard the well-known *braid Scots* of the boatmen, and already thought myself quite at home. We had not entered the bay many minutes, when Mr. Edmondston, the proprietor of North Unst, and of several other isles, sent us a pressing invitation to come and breakfast with him, which we gladly accepted, as soon as we heard that no ladies were to be present. So, shaving ourselves, and putting on the most decent clothing that our wardrobe afforded, (on which, however, I had previously to exercise my sartorial abilities for more than an hour,) we went ashore, and met with the kindest reception from this hospitable Lord of the Isles, who, though he knew nothing of us, yet strove to make us feel quite at ease, by lavishing on the sea-beaten strangers the true Highland hospitality. When he found out my name he promised to introduce me to his brother, Dr. Edmondston, who, several years before, had been acquainted with our family.

After breakfasting we went over to Balta Island, directly opposite Balta Sund, where I hoped to kill some birds. I obtained a few *Tringas*, &c., but after having, for a long time, chased a number of *Rock Pigeons*, I was unable to get within shot of them. I was struck with the immense flocks of *Starlings* flying about; several pairs of them came down Mr. Edmondston's bedroom chimney, and were captured and safely deposited in one of Mr. Christy's dilapidated and vacant plant-cases.

During dinner, Dr. Edmondston, who had arrived, proposed that next day, while the ship was refitting, we should take a ride to the northernmost part of Shetland to see the *Skerries*, which are a few insulated rocks, constituting the most northern extremity of Her Britannic Majesty's dominions.

On the 2d September, Mr. Christy, Dr. Edmondston, and myself, mounting three of the Laird's shelties trotted off on these sturdy little animals, our feet nearly touching the ground. We first visited some Chrome mines, where this mineral is found existing in the form of Chromate of Iron; and then proceeded to see a relic of antiquity, being one of those curious (so called Druidical) circles, in which it is supposed that judgment used to be held by the Chiefs. This was in a very perfect state, and consisted of four outside raised circles, formed of the coarse Serpentine stone, which prevails in the southern parts of North Unst, covered with turf. The diameter is about fourteen paces, and in the middle is a cavity about three quarters of a foot deep, with the earth raised around it. Other circles of the same kind exist in this island, but none in equally good preservation.

After viewing this curious object, we went to Barrowforthness, crossing a spot where the serpentine rock terminates abruptly, and peat moss commences just as suddenly. This appearance is highly extraordinary, and the distinction very well marked; and as if to render it still more visible, a wall, which is before a house, is built, where the serpentine prevails, of that rock; while, where it has its foundation on the peat moss, turf is employed in its construction. It seems as if some gigantic knife had shorn away the rock, and laid it against a sea of peat-moss. If our path had been hitherto rough and stony, shaking us in our saddles, and threatening to make us sore and stiff ere our ride was half over, it was here deep, uncertain and yielding. Every now and then our poor ponies plunged up to their bellies in soft mud; but we had only to stick fast to their backs, and the sagacious animals soon found the best way of extricating themselves.

Upon Burrowforthness, Mr. Edmondston keeps a *preserve* of *Skua Gulls*. Though not a scientific man himself, he thought it a pity that so beautiful and rare a bird should be exterminated by a mercenary set of people, who sometimes come and shoot them in great numbers, for sale in London. This spirited gentleman, who well deserves the thanks of all Naturalists, built therefore a wall across the point where these birds breed, and employs a man to watch that none of them shall be killed. I am happy to add that his plan promises to succeed perfectly; at first there were but two pairs of *Skua Gulls*, and now there are twenty. I did not expect to get near enough to see any of them, but a young bird hardly able to fly, and an old one, apparently its parent, permitted me to approach within twelve or fourteen yards of them. This Gull builds upon the ground, simply scratching away the grass, and in the cavity, for it can hardly be called a nest, it deposits two eggs, very similar, both in size and markings, to those of the *Black-backed Gull*. The appearance of the *Skua Gull* when flying is, I think, best expressed by saying that it bears a strong resemblance to an immense Wood Pigeon, their colour, shape, and proportions being very much alike.

Mr. Edmondston is an indefatigable Seal-hunter, and has killed several specimens of the Great Seal, *Phoca barbata*, which is not unfrequently seen here. I forgot to take a note of the dimensions of one that he killed, and were I to state its length, circumference, &c., from memory, I might probably commit blunders; besides, the size was so enormous, that accurate particulars would be needful to ensure credence.

Rabbits were here in immense abundance, reminding me of the expression in the civ. Psalm, "the stony rocks are a

refuge for the conies," for these little creatures were seen in all directions, darting about the cliffs, and harbouring in spots where I cannot imagine how they obtain grass or anything to satisfy their hunger.

The view from the extreme point of North Unst, where we now stood, is very fine. Beyond us lay the Skerries, consisting of several, apparently, bare and naked black rocks, raising their crests above the roaring waves, and "collared with a mane of foam." One of these rocky islets bore a considerable resemblance to the head and shoulders of some animal, reared above the water. Upon one or two of them, Dr. Edmondston told us, sheep were fed; but, in the first place, it puzzled me to imagine how sheep could be landed there, nor how, if they were landed, they could find shelter and obtain food; for excepting the sea-weed that fringed their precipitous sides, no tinge of green, indicating verdure, was visible to my eyes. Above and around them the Gannets were soaring in great numbers, and plunging from immense heights into the sea. The form of the head, the density and rigid nature of the plumage which characterize this bird, render it peculiarly suited to bear uninjured the shock of darting downward into the agitated waves from such a height. I watched the Gannets while in the act of doing this, and saw them, having balanced themselves in the air, turn their heads down, stiff and straight, and in this attitude descend, quick as thought, dashing the angry spray on each side, and never missing their prey. In the Penny Magazine is a representation of these birds plunging, but it is not accurate, for the neck is never curved, as it appears there, but is always kept perfectly straight. The fishermen augur a good herring season from

the presence of these Gannets, and, indeed, the poor Shetlanders stand in much need of one this autumn. Their last harvest was a failure, and so was the fishery, and the present year, I am sorry to say, affords but a very poor prospect.

After sitting on the Point a considerable time, we retraced our steps, and as we passed a village a woman came out, bringing three children dreadfully afflicted with *Tinea capitis*, for Dr. Edmondston to see. One of them, especially, was a most disgusting object, the entire scalp being covered with a thick scab like a plaster. I learned that the disease is *hereditary* in that family.

On coming home I was surprised to see so many tame Gulls, *Larus canus* and *L. argentatus*, sitting and running about the houses; and found, on inquiry, that Mr. Edmondston extends his protection to these birds also. We had no sooner, indeed, entered Balta Sund, than we were requested not to shoot them.

September 3rd.—This day we again set sail, in spite of Mr. Edmondston's prognostications about the weather, and his brother's and my bulletins respecting the health of the crew, none of which were very favourable.

Several Shetland Ponies were taken on board the ship, which were paid for in bread, at the rate of thirty shillings to two pounds each, the most beautiful and the smallest jet black creatures I ever beheld, perfectly smooth and sleek. The poor Shetlanders refused every kind of payment for these animals, excepting the ship's biscuit, which they received most eagerly.

Dr. Edmondston brought his two sons on board to see the remaining Reindeer. The eldest is a particularly intelligent

boy, and passionately fond of Natural History; I was shown some of his attempts at drawing, highly characteristic of the objects for which they were intended. Since the first edition of this Journal was printed, that is in the Autumn of 1837, my father received a very interesting communication from Dr. Edmondston, consisting of specimens of a remarkable variety of the rare *Lathyrus maritimus*, (*Pisum* L.,) which is now published in the 4th edition of Brit. Flora, as *L. maritimus* β . by Dr. Graham; of an *Arenaria*, quite new to Britain, the *Arenaria Norvegica*, (see Brit. Fl. ed. 4, p. 182,) discovered by his son in Shetland, together with a catalogue of the phnogamous plants of those most northern islands, the "Ultima Thule" of the British groupe. Of this list Mr. Edmondston observes, "imperfect as it may be, it is the only thing like a commencement of a "*Flora Shetlandica*" which we have; and it is the production of a boy of *eleven* years of age, who never attended to Botany till within these few months, and who possessed only two books, "Willdenow's Introduction," and "M'Gillivray's edition of Withering," and had no other assistance whatever." Under these circumstances, I have thought the catalogue worth inserting, and I trust it will be a stimulus to this young gentleman's future exertions in the cause of Botany.

List of Plants observed in the Island of Unst, Shetland, during the summer of 1837, by THOMAS EDMONDSTON:—

MONANDRIA MONOGYNIA.

Hippuris vulgaris; common in deep muddy burns; specimens gathered in May.

Zostera marina; grows in sand around the coast; totally immersed in sea-water; almost always used for bedding.*

* This plant is applied to the same purpose in Iceland.

IGYNIA.

Callitriche verna ; in muddy ditches ; July.

DIANDRIA MONOGYNIA.

Veronica officinalis ; rare, on serpentine formation.

Pinguicula vulgaris ; common ; June.

DIGYNIA.

Anthoxanthum odoratum ; common ; June.

TRIANDRIA MONOGYNIA.

Iris pseudacorus ; common by the sides of burns.

Schoenus nigricans ; rare, on serpentine ; July.

Scirpus lacustris ; rare, Loch of Lund, used by coopers ; August.

Elocharis palustris ; common, sand of Bursafirth ; July.

Eriophorum vaginatum ; common ; June.

Nardus stricta ; common, Hermaness ; June.

DIGYNIA.

Alopecurus geniculatus ; common ; May.

Arundo arenaria ; rare, sand of Bursafirth.

—— *colorata* ; common, Bursafirth ; July.

Agrostis vulgaris ; common ; July.

—— *setacea* ; * rare ; June.

—— *alba* ; rare, Bursafirth ; June.

Aira flexuosa ; rare, Hermaness ; July.

—— *præcox* ; common ; May and June.

Melica cærulea ; common ; May.

—— *uniflora* ; rare, Baltasund ; June.

Sesleria cærulea ; rare, Woodwick ; July.

Poa trivialis ; common ; Baltasund.

—— *pratensis* ; rare ; the most beautiful of our grasses, except perhaps *Briza media* ; Baltasund ; middle of August.

—— *annua* ; common, Baltasund.

—— *fluitans* ; common, Bursafirth.

Briza media ; very rare, serpentine formation, gathered 12th August, 1836.

Festuca duriuscula ; common ; Baltasund ; June.

—— *elatior* ; rare, Bursafirth.

—— *vivipara* ; common, Baltasund ; June.

Bromus mollis ; common ; 24th May.

Avena fatua ; rare, Bursafirth ; July.

Elymus arenarius ; rare, sand of Bursafirth, used along with *Arundo arenaria*, for twisting ropes and making brooms, &c.

Triticum repens ; very common ; July.

Lolium perenne ; hardly indigenous, but extensively cultivated for hay.

* This is probably an error. H.

TETRANDRIA MONOGYNIA.

- Scabiosa succisa* ; common ; August.
Galium Aparine ; rare, Baltasund ; July.
Galium saxatile ; rare, Hermaness ; July.
Plantago major ; common ; August.
 ——— *maritima* ; common ; June.
 ——— *lanceolata* ; common ; May.
 ——— *Coronopus* ; not rare, Swinanness ; May.

TETRAGYNIA.

- Potamegoton natans* ; common.
 ——— *lanceolata* ; rare, Loch of Cliff ; July.

PENTANDRIA MONOGYNIA.

- Lycopsis arvensis* ; common in corn-fields, Baltasund ; July.
Myosotis arvensis ; common ; June.
 ——— *capitosa* ; common in muddy pools, Norwick ; July.
Primula vulgaris ; very rare, Links of Lund ; May, 1836.
Menyanthes trifoliata ; common in deep burns—Burn of Valafeild—
 used as a medicine by the people of Shetland, being very astringent ; June.
Lithospermum maritimum ; rare, Norwick.
Jasione montana ; not common ; July.
Viola canina ; July.
 ——— *tricolor* ; common ; July.
Gentiana campestris ; common ; July.
 ——— *Amarella* ; rare, Balta Island ; July.
Hydrocotyle vulgaris ; common in marshy places, Bursafirth ; June.
Sanicula Europæa ; rare, Woodwick ; July.
Ligusticum Scoticum ; rare, Bursafirth ; July.
Angelica sylvestris ; rare ; June.
Heracleum Sphondylium ; rare.
Chærophyllum sylvestre ; very common ; July.
Alsine media ; rare, Baltasund ; May.

PENTAGYNIA.

- Statice Armeria* ; common, Baltasund ; July.
Linum catharticum ; rare, on serpentine ; July.

HEXANDRIA MONOGYNIA.

- Scilla verna* ; very common, especially this year, probably because it was unusually dry ; May.
Hyacinthus Nonscriptus ; very rare, probably only the outcast of gardens.
Anthericum ossifragum ; common, Woodwick ; July.
Juncus squarrosus ; very common on heaths ; July.
 ——— *uliginosus* ; grows in wetter places than the former ; August.

Juncus effusus ; common on heaths, used for twisting into ropes, &c.
Luzula campestris ; common ; May.
 ——— *sylvatica* ; rare, Hermaness ; June.

HEXANDRIA TRIGYNIA.

Rumex crispus ; too common ; June.
Triglochin palustre ; rare, on serpentine.

OCTANDRIA MONOGYNIA.

Erica cinerea ; not common, on gneiss ; July.
 ——— *tetralix* ; common ; July.
 ——— *vulgaris* ; very common, on gneiss chiefly ; July.
Vaccinium Myrtillus ; very rare, Hermaness ; June.
Epilobium angustifolium ; very rare, Bursafirth ; July.
 ——— *palustre* ; rare, Woodwick ; June.

TRIGYNIA.

Polygonum aviculare ; common ; July.
 ——— *Persicaria* ; not rare, Bursafirth ; August.

DECANDRIA TRIGYNIA.

Silene maritima ; common on the sea-shore.
 ——— *acaulis* ; common on serpentine ; May.
Stellaria media ; common ; August.
Arenaria peploides ; common on the sea-shore, both on sand and gravel ; May.
 ——— *Norvegica*, Hook. Brit. Fl. ed. 4. p. 182 ; rare, July ;
 (New to Britain.)
 ——— *marina* ; rare, on gravel ; June.

DECANDRIA PENTAGYNIA.

Lychnis dioica ; common in shady places ; June.
 ——— *Flos Cuculi* ; common in meadows ; July.
Cerastium viscosum ; common ; July.
 ——— *vulgatum* ; not common ; June.
 ——— *alpinum* ; very rare, on serpentine ; June.
Spergula arvensis ; too common ; July.

ICOSANDRIA MONOGYNIA.

Spiræa Ulmaria ; not common, Cliff ; July.

POLYGYNIA.

Rosa canina ; very rare, Bursafirth ; July.
Comarum palustre ; rare, Woodwick ; July.
Tormentilla officinalis ; very common ; July.
Potentilla anserina ; very common ; July.

POLYANDRIA MONOGYNIA.

Papaver Rhæas ; very rare, Shaw ; August.
 ——— *dubium* ; very rare, Baltasund ; July.

POLYGYNIA.

- Ranunculus acris* ; very common ; July.
 ——— *Ficaria* ; not common ; May.
 ——— *Flammula* ; common in wet places ; July.
 ——— *repens* ; not common ; June.
Caltha palustris ; common ; July.

DIDYNAMIA GYMNOSPERMIA.

- Thymus Serpyllum* ; common ; August.
Galeopsis Tetrahit ; very common ; July.
Prunella vulgaris ; common ; July.
Lamium purpureum ; common ; August.

ANGIOSPERMIA.

- Euphrasia officinalis* ; very common ; August.
Rhinanthus Crista galli ; common ; July.
Pedicularis sylvatica ; common ; July.
 ——— *palustris* ; not common, Cliff ; July.

TETRAIDYNAMIA SILICULOSA.

- Bunias Cakile* ; not common, sand of Sanwick ; June.
Thlaspi Bursa Pastoris ; common ; July.
Cochlearia officinalis ; rare, Bursafirth ; June.
 ——— *Danica* ; very rare, Baltasund ; May.
Draba incana ; very rare, on serpentine ; July.

SILICOUSA.

- Cardamine pratensis* ; common in wet places ; June.
Arabis petraea ; very rare, on serpentine gravel ; July.
Coronopus didyma ; rare, on mica ; May.
Sinapis arvensis ; too common ; June.
Raphanus Raphanistrum ; rare ; May.

MONADELPHIA DECANDRIA.

- Geranium molle* ; rare, on gneiss ; June.

DIADELPHIA OCTANDRIA.

- Polygala vulgaris* ; common ; June.

DECANDRIA.

- Anthyllis vulneraria* ; common ; May.
Orobis tuberosus ; rare.
Lathyrus pratensis ; common ; July.
 ——— *maritimus* ; β . (Graham, in Hook. Br. Fl. ed. 4. p. 279,) found by me, on the 25th June, growing in sand at Bursafirth, and afterwards collected by Dr. M^cNab.
Vicia Cracca ; common, Bursafirth ; July.
Trifolium medium ; not common, Bursafirth ; July.
 ——— *repens* ; common ; June.

POLYADELPHIA POLYANDRIA.

Hypericum pulchrum; not common; July.

SYNGENESIA ÆQUALIS.

Sonchus arvensis; common in cornfields; August.

—— *oleraceus*; rare; August.

Leontodon Taraxacum; rare; May.

—— *palustre*; common, Woodwick; July.

—— *autumnalis*; common; July.

Hieracium maculatum; rare, Bursafirth; July.

—— *dubium* (?) do. do.

Carduus lanceolatus; common; August.

SYNGENESIA SUPERFLUA.

Tanacetum vulgare; not common; August.

Artemisia vulgaris; common; July.

Gnaphalium dioicum; common; June.

Tussilago Petasites; rare, Bursafirth; August.

Senecio vulgaris; common; July.

Solidago Virga-aurea; not common, Bursafirth; July.

Bellis perennis; very common.

Chrysanthemum Leucanthemum; not common.

—— *Segetum*; rare; August.

Pyrethrum inodorum; very common; June.

Achillæa Millefolium; common; August.

—— *Ptarmica*; rare, Woodwick; July.

GYNANDRIA MONANDRIA.

Orchis mascula; common; June.

—— *maculata*; not very common; June.

Habenaria viridis; rare, on serpentine; July.

MONECIA MONANDRIA.

Euphorbia helioscopia; common in corn-fields.

TRIANDRIA.

Sparganium natans; rare, Loch of Cliff; July.

Carex flava; not very common; July.

—— *fulva*; very common on the serpentine formation; August.

—— *binervis*; not common; August.

—— *ampullacea*; not common, burn of Valafield.

TETRANDRIA.

Urtica dioica; common, July.

DIOECIA DIANDRIA.

Salix repens; not common; June.

—— *aquatica*; rare, Bursafirth.

TRIANDRIA.

Empetrum nigrum ; common on heaths ; July.

DIOECIA OCTANDRIA.

Rhodiola rosea ; very rare, Bursafirth ; June.

POLYGAMIA MONOECIA.

Atriplex patula ; not common ; August.

——— *luciniata* ; common on the sea shore ; July.

Holcus mollis ; rare, Bursafirth.

——— *lanatus*, very common ; June.

——— *avenaceus* ; not common ; August.

To resume my narrative:—on the 3rd of September a brisk breeze sprung up, and with mutual hopes of meeting again, we dashed forward towards home, and our kind friends Dr. Edmondston and his two sons, soon dropped astern. We found, however, that our dangers were not half over ; storms and gales still awaited us. The alarming consciousness that we were carrying a far too heavy cargo, of a very unmanageable material, kept the Captain in a constant state of fidget and distress, and soon every thing was in a worse condition than ever. Twice we were as nearly wrecked as possible—three hands laid up with illness—the sails were almost all shivered—and the destruction on deck was completed by our boats being stoved, and the guy of the mainboom smashing first the wheel and then a tiller, with which we supplied its place. The latter accident occurred as we were off *Fitful Head*, having that dangerous shore but a short distance on our lee, while we were for a considerable time quite at the mercy of the weather, tide, &c., without power of guiding the vessel's motion, while the wind blew a perfect hurricane.

On the 9th of September we reached the Butt of Lewis, and this was the first day on which I could look about me and

ascertain the extent of the mischief done. Another Deer died, and another man was laid up from hard work, and want of sufficient and properly cooked food. From the beds of the poor fellows in the forecastle I could wring the water, and though we, cabin passengers, were somewhat better off, yet our clothes were constantly damp, and the sea making its way through the crevices of the deck into our berths, and oozing in at every seam of the ship, we could keep nothing dry, nor could we obtain any warm and comfortable victuals. The bad weather obliged us to put into a bay in the island of Harris, where we lay for a night; and finding there a Russian vessel bound for Greenock, with timber, I hurried to collect together all the goods of my own upon which I could lay my hands, trusting to Mr. Christy's kindness to find, during the discharge of the cargo, whatever I might leave behind. So, going on board the homeward ship, that I might see if I could not proceed to Greenock in her, I discovered her to be so dreadfully filthy—so perfectly worthy of the character for dirt that all Russian vessels bear, that I could not endure the idea of taking my passage in company with as many “creeping things” as ever inhabited Noah's Ark.

Still the wind, though its violence had abated, continued adverse, and our provisions ran short. We had counted on finding a case of bread, and so we did; but the water, having, during the storms, got into the mate's berth, it had oozed thence into the bread-locker, so that all our biscuit was spoiled. A somewhat similar disaster had befallen our slender stock of water, and we had to wash down our sorry mess of dirty crumbs, boiled in sugar, with claret! A vessel which we met, though nearly in the same distress with ourselves

spared us a dozen biscuits and a few potatoes, but no water. Mr. Christy and I made the fortunate discovery of a box of Malaga raisins in the Captain's locker, which served to appease our hunger as long as they lasted.

Saturday, 17th September.—Last night we came in sight of the Mumbles Light-house, near Swansea; but though we made signals for a pilot, none could be had till this morning. Anxious to be on shore, “we cast anchor and wished for the day.” By seven o'clock a steamer came out and towed us into the Swansea river, and very agreeably was I surprised by the aspect of this town and the surrounding country. I had expected that every thing would be blasted by the fumes of copper; on the contrary, I beheld a very neat town, surrounded by hills, the sides of which, facing the south, were beautifully wooded and protected from the noxious fumes of sulphur and arsenic. A glance up the valley, however, disclosed a strikingly different scene; the pestilential white smoke which hung over it, destroyed all vegetation, so that hardly even a blade of grass dared lift itself above the sterile and blasted soil.

Mr. Christy and I took a walk upon the sands to survey the country, and returned home through the market, which was large, and seemed very well supplied. It was a novel and interesting sight to me to observe the women all wearing *hats* similar to those of the men. Many of them carried pitchers of a curious form, nicely balanced upon their heads. I noticed more than one, whose shoes and stockings were borne in her hands, instead of on her feet; quite after the Scotch fashion.

When we went back to the *Harriet*, we found that our Captain's father, who resides at Swansea, had come on board,

and kindly insisted on our staying at his house. Thither we had our luggage removed, after some petty difficulties; for several of our Norwegian curiosities were charged with a heavy duty, and others forbidden to pass at all. A little management, however, settled this affair, and we gladly pursued our way to Mr. Moyse's house.

September 19th, Monday.—At ten o'clock, our Captain, with a relation of his, together with Mr. Christy, and myself, took a two-horsed vehicle, called a Fly, and rode twenty miles, to a place, by name Margham, celebrated for possessing a noble oak forest.

In our drive, we passed the Copper works, from which proceeded strong fumes of garlic, as well as sulphur. So powerful was the impregnation of arsenic, that the tops of many of the furnace chimneys were whitened by its condensing upon them. It is a singular fact, that while vegetation is destroyed all around by these exhalations, no prejudicial effects seem to be produced upon animal life; the workmen being more healthy and longer lived than those in the town of Swansea.

A plan has been contrived by J. H. Vivian, Esq., M.P. for Swansea, for condensing a portion of the arsenical vapors. This consists in leading a number of the furnace-flues under ground for one-eighth of a mile, or thereabouts, keeping water always upon the tube till it reaches a large and lofty chimney, where it is permitted to escape. Two advantages accrue from this plan. A very evident difference exists between the quantity of arsenic emitted by those flues which rise immediately from the furnaces (in these the white smoke is extremely predominant,) and by those which are connected with them by a long intervening tube. Again, when these flues, which are

built of brick, are opened and cleaned, which is done every two or three years, the quantity of white arsenic, or, as it is more properly called, *arsenious acid*, which is taken out, fetches a considerable price; besides which, there is also found deposited some very pure and particularly valuable copper; all which, were it not for this contrivance, would be lost.

Before reaching Margham, we passed a chapel of *Welsh Jumpers*, called *Zoar*. While our dinner was preparing, we went to visit Margham Abbey, as the mansion of Mr. Talbot is called; it is placed in a most enviable site; the splendid park including a portion of the noble Oak forest that I have mentioned. Such *children of the soil* for stature and luxuriant developement I had never beheld. Planted at exactly equal distances, and apparently at the same date, these giant Oaks, like so many twin brethren,

“grew in beauty, side by side,”

forming long-drawn alleys, through the vistas of which the eye might look till the distance seemed to dwindle to a point, their tufted foliage spreading a canopy overhead.

The house itself is built in an indifferent taste, and none of the apartments are handsome, though furnished in a costly manner. I admired some of the paintings, which were much in the style of Vandyke; several sea-pieces, also, struck me as being very bold in conception and exquisitely finished, but here the more experienced eye of our Captain detected so many errors, that I was afraid to bestow any praises upon them.

From Margham Abbey we proceeded to the church, in

order to see the monuments of the Talbot family, which were all executed in the stiffest old style "of sculptured Knight and Ladye fair." Thence after dining, we went to a sort of little Inn, where a *Revel*, as such a junketting is here called, was going on. Great numbers of Welsh lads and lasses were collected, eating, drinking, and dancing, and this frolic was to continue for two or three days, or perhaps a week. A sort of Reel was in course of performance while we were there.

The fondness of the lower classes of Welsh for chequered garments is quite remarkable, reminding me of the Highland partiality for tartan, it is the all-prevailing garb in every variety of colour, and size, and arrangement of pattern, among the peasantry, both men and women.

Our drive home to Swansea was very beautiful, past a great number of sweet villas and country-houses. The neighbourhood of the town, however, presented a total change, from the copper works and arsenical smoke blasting all vegetation. There are a great number of coal-pits about Swansea, and a good deal of the coal, which is of an excellent quality, is sent abroad, especially to France.

September 21st, Wednesday.—This morning early Mr. Christy started for Bristol. I rose and saw him off, and very dull and deserted did I feel all the rest of the day, after the departure of so kind and amiable a companion, with whom I had spent day and night (for he was generally my bed-fellow) for more than three months.

After breakfast, I took an omnibus to the *Mumbles*, a distance of seven or eight miles. This is a beautiful spot, and much frequented as a watering-place, the houses being placed

at the foot of the cliff on which the light-house is built. Thence I proceeded to Oystermouth castle, which is a fine and extensive ruin, of the history of which I could obtain no information from several persons whom I asked about it, though all agreed that Oliver Cromwell dismantled it. So true is it that "men's ill deeds we register in marble;" while "sand" is the vehicle in which their better ones are handed to posterity. From the cliffs of the Mumbles I obtained a beautiful view of the adjacent country, which is rich and finely wooded with Oaks and Scotch Fir, after which I returned to Swansea, where I engaged a berth in the Mountaineer steamer for Liverpool, next morning, anxious to reach home as quickly as possible.

A passage of about thirty-six hours brought me from Swansea to Liverpool, where I visited the Museum, and walked about to see the town, my dress being far too shabby to allow me to call on any of the numerous individuals with whom I was acquainted. Very wearily did my solitary hours pass during the interval of the next steamer's starting for Glasgow. I endeavoured to beguile them by revising my journal, and finishing some sketches, and on Saturday morning, (September 24th) I sailed from Liverpool, and had the happiness to reach home by noon on the following day, thankful for all I had seen during my wanderings, but most thankful to behold the "long familiar household faces" once again.



